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November 1, 2006

Dr. Paul Rispin, Program Manager
Office of Naval Research, Code 331
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Arlington, VA 22203-1995

Subject: Deliverable Number 0004, Project Management Plan

Reference: Strategic Mobility 21 Contract N00014-06-C-0060

Dear Paul,

In accordance with the requirements of referenced contract, we are pleased to submit this Project Management Plan for your review.

Your comments on this document are welcomed.

Regards,

Dr. Lawrence G. Mallon
Strategic Mobility 21 Program Manager

cc: Administrative Contracting Officer (Transmittal Letter only)
       Director, Naval Research Lab (Hardcopy via U.S. Mail)
       Defense Technical Information Center
       Stan Wheatley

Strategic Mobility 21

Project Management Plan

Contractor Report 0004

Prepared for:

Office of Naval Research
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Arlington, VA 22203-1995

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In fulfillment of the requirements for:

FY 2005 Contract No. N00014-06-C-0060
Strategic Mobility 21 – CLIN 0004

Prepared and Submitted by:

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September 29, 2006

REPORT DOCUMENTATION PAGE

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Abstract

The purpose of this Program Management Plan (PMP) is to define the program management processes, initial functional capabilities, and technical development of the Strategic Mobility 21 (SM21) program. The principal management and technical guidance for SM21 is defined in this PMP, which includes Annex A - Initial Capabilities Document (ICD) and Annex B - Technical Plan. As directed by the program structure, the Annexes have been developed as separate documents. The initial use of separate documents will improve the utility and required updates of both the ICD and the Technical Plan.

SM21 has established a consortium of public and private, governmental and non governmental, academic, and other impacted parties to develop and demonstrate emerging processes and technologies to expand the productive capacities of Southern California ports while balancing regional quality of life issues as well. The SM21 Joint Operational Concept Document (JOCD) introduced the SM21 program as a Joint Advanced Logistics Technology Demonstration (JALTD). This PMP further defines the JALTD and the associated management of the four year program. The JALTD will be managed as a modified Department of Defense (DoD) Advanced Concept Technology Demonstration (ACTD) and will follow the basic guidance issued for the development and execution of ACTD programs. The initial SM21 capabilities, described in Annex A, are associated with the Joint Power Projection Support Platform (JPPSP) demonstration. As proposed under the SM21 program sponsored by the California University Long Beach Foundation, the JPPSP is the inland dual use[1] component of the Agile Port System (APS) concept. The APS concept was developed by the Center for the Commercial Deployment of Transportation Technologies (CCDoTT).

Annex A is formatted as an Initial Capabilities Document and provides the foundational requirements to develop the JPPSP demonstration program using the DoD Joint Capabilities Integrated Development System (JCIDS) procedures. The ICD, which is not required by JCIDS to initiate an ACTD, will be revised after the first year of the JALTD to include the value gained from the additional capability analysis. Demonstrating the initial capabilities of the JPPSP in Southern California presents a unique opportunity for collaboration with non-DoD partners to address and solve issues associated with the capabilities and capacities of US ports. In demonstrating solutions for the Southern California region, SM21 will be developing a prototype system of systems solution that can be used as a guide or template at other ports and military distribution nodes.

The Annex B - Technical Plan addresses the technical management parameters of the SM21 program and describes the program's technical approach. The Technical Plan is based on the DoD ACTD tenet of maintaining a flexible approach to the advanced development process and to avoid excessive rigidity and formality in documentation and process. Hence, this Technical Plan is an executive-level document, written in informal, primarily non-technical language. Since it is a plan; it is not intended to be immutable, as modifications may be warranted from time to time.

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[1] Dual-use refers to facilities or technologies that serve both the commercial and military sectors.

SECTION 1

1.0 Overview

1.1 Purpose

The purpose of this Program Management Plan (PMP) is to define the program management processes, initial functional capabilities, and technical development of the Strategic Mobility 21[2] (SM21) program. SM21 was introduced in the Joint Operational Concept Document (JOCD) as a Joint Advanced Logistics Technology Demonstration (JALTD). This PMP further defines the JALTD and the associated program management. The JALTD will be managed as a modified Department of Defense (DoD) Advanced Concept Technology Demonstration (ACTD) and will follow the basic guidance issued for the development and execution of ACTD programs. The principal management guidance for SM21 is defined in this PMP, which includes Annex A - Initial Capabilities Document (ICD) and Annex B - Technical Plan. This PMP provides the operational guidance for the program and is supplemented by the SM21 Project Management Office Operating Procedures, which provides the administrative processes necessary to standardize and support team efforts.

Figure 1 – SM21 Joint Operations Concept Document with Annexes

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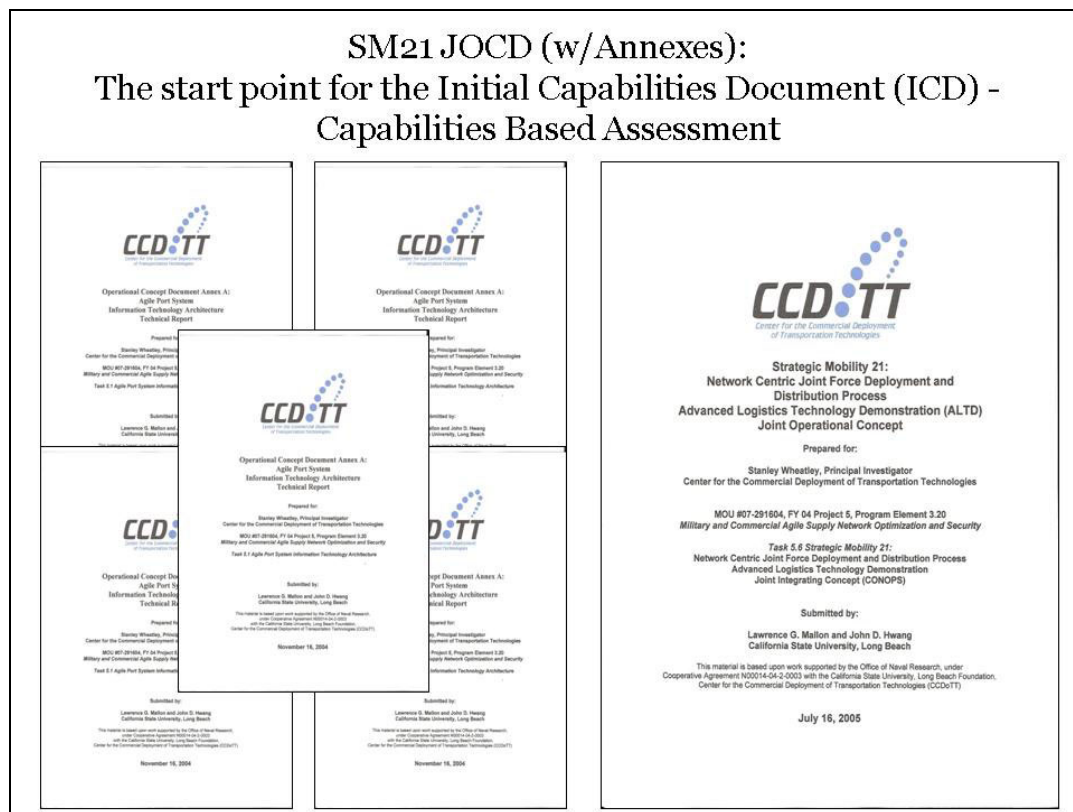
[2] Strategic Mobility 21 is a Congressionally mandated and independently funded applied research program through the Office of Naval Research. The program is conducted under the auspices of the Center for the Commercial Deployment of Transportation Technologies (CCDOTT), a government-industry academic collaborative enterprise.

The PMP is a living document and will be updated as required to reflect the most current program structure.

1.2 Program Management Plan Document Structure

This Project Management Plan consists of four sections with two appendixes as outlined below:

- Section 1 Overview: Provides an overview of the PMP and includes the program structure, objectives, and applicable program documents.
- Section 2 Overall Approach: Describes the four year SM21 JALTD program approach, the FY05 task relationships and Integrated Product Team structures, capability gaps, and outlines the operational demonstration requirements.
- Section 3 Programmatic and Organizational Approach: Provides an overview of the Integrated Product Team structure and control mechanisms to manage the program and technical engineering development of the program.
- Section 4 Communication Plan: Defines the policies and procedures established to enhance the collaborative flow of information throughout the project.
- Annex A – Initial Capabilities Document: The purpose of this document is to define the military need for a JPPSP using the general guidance provided by the Joint Capabilities Integrated Development System (JCIDS) procedures.
- Annex B – Technical Plan: Provides the overall SM21 JALTD Technical Plan including the associated Technologies, Processes, and Technical Approach. The Annex also provides a review of the emerging and advanced technologies along with the measures of effectiveness and performance; risk assessment; system interoperability; experimentation and demonstrations, and modeling and simulation aspects of the program. The Systems Engineering Plan for JALTD is provided in the final section of Annex B.

The SM21 PMP is based on the ACTD tenet of maintaining a flexible development approach and avoids excessive rigidity and formality in documentation and process. Hence, this PMP is an executive-level document and, since it is a plan; it is not intended to be immutable, as modifications may be warranted from time to time. The PMP does provide sufficient detail to ensure the vital objectives, approach, critical events, participants, schedule, and transition objectives are understood by all relevant parties. Measures of effectiveness and performance evaluation, to be considered in addressing both effectiveness and suitability of the dual use distribution capability are defined.

The SM21 JALTD includes a dual-use capabilities demonstration and evaluation process in which the development and employment of distribution technology and innovative operational concepts by both the military and commercial user is the primary focus. SM21 will identify mature, maturing, and experimental distribution management processes and technologies to solve the important military and commercial distribution problems. These capabilities, operational concepts, and business processes will then be evaluated in a series of trade studies, simulations, and experiments. This process will select the appropriate technology and processes to be included in an initial commercial and military capability demonstration. The initial capability demonstration is tentatively planned for the spring of 2007. The planned early demonstration and evaluation will be accomplished in a real-time operation in the Pacific Northwest[3] during a large

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[3] The Pacific Northwest demonstration, illustrates the collaborative approach not only with in the program, but with

scale military force deployment. The intent of this early demonstration is to clearly establish the operational utility and initial SM21 system integrity.

1.3 Background

While this document focuses on the management aspects of the SM21 JALTD, it is important to understand why this program was initiated. This is the second full program year for SM21, which began during the previous program year with the development of the SM21 JOCD. The JOCD with supporting annexes provides the conceptual foundation for SM21.

The SM21 JALTD was initiated to address the logistics distribution shortfall created by the increasing import of commercial containers; stove-piped information management systems; outdated business processes associated with distribution logistics; and the requirement to support the increasing demands associated with military deployments. The JALTD was also initiated because of the opportunity provided by the closure of the former George Air Force Base located at Victorville, California, which was closed as a part of the Defense Base Realignment and Closure process. A more complete description of the facility now referred to as the Southern California Logistics Airport (SCLA) and ongoing commercial development can be found at the following website: www.logisticsairport.com.

Figure 2 – Southern California Logistics Airport Development Concept Overview

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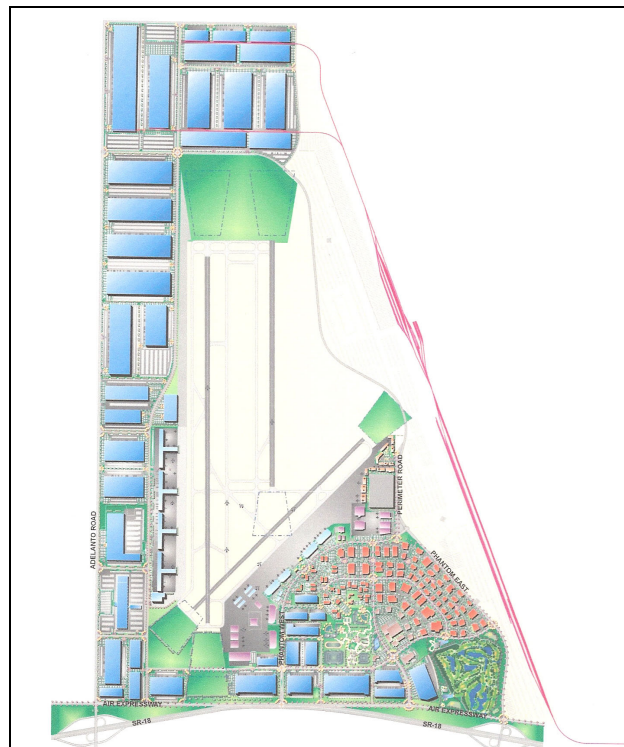
programs working to address similar issues or developing methods to leverage emerging technologies. It will be a cooperative event with the Center for the Commercial Deployment of Transportation Technologies' Agile Port System (APS) program. The APS program has previously completed a commercial only demonstration at the Port of Tacoma, Washington United Terminal.

This PMP supports the collaborative efforts of the SCLA Authority, Stirling Airports International, the Southern California Association of Governments (SCAG), and other stakeholders to transform the former military installation into a modern in-land distribution node. This collaboration is designed to support the creation of local employment, the competitive status of ports in Southern California, along with improved commercial distribution logistics and military force deployment and sustainment operations. The JALTD will support the design and development of the Joint Power Projection Support Platform (JPPSP) at the former Air Force Base. The JPPSP was initially defined in the SM21 JOCD and is further defined in Annex A to this PMP. A primary component of the JPPSP is a dual-use[4] inland multi-modal terminal and distribution facility.

1.4 Overall SM21 JALTD Objective

The JALTD will seek a primary end state of improving commercial and military logistics interoperability by increasing the completeness and availability of actionable information available at the point of need. Improved data integration based on best commercial practices will be incorporated in the system architecture to improve overall data quality. This improved data availability will support the planning, dynamic re-planning, and execution of commercial distribution and will also support the deployment of military forces and the required sustainment of deployed forces. It will aid in resolving the lack of regional (nodal) collaborative structures to meet current and future global trade driven demand and will support unpredictable military requirements for the full spectrum of military operations without significantly impacting commercial commerce (Mallon, 2005). Additionally, the JALTD objectives support the Department of Homeland Security (DHS) multilayered port security strategy that is requiring shippers to share more complete and accurate shipment information. This includes information associated with the shipment integrity, tracking, content, and information.

The SM21 information support systems will be web-based and will incorporate solutions from commercial and DOD stakeholders. The transition from development to deployment will be consistent with the associated DoD and commercial system architectures. To this end, it is appropriate to include an Architecture Design Review early in the second year of the SM21 JALTD development process and to offer the Defense Information Systems Agency (DISA) and commercial stakeholders the opportunity to participate as appropriate. Over the life of the program DISA has the ability to provide technical and development guidance and could evaluate the possibility of transitioning SM21 capabilities with military utility from demonstration to production.

Currently the Office of Naval Research (ONR) along with the VOLPE National Transportation Systems Center provide support and oversight for this JALTD and work with SM21 in an attempt to identify other appropriate demonstration sponsor support. Other potential DoD stakeholders include the United States Transportation Command (USTRANSCOM), the Joint Forces Command (JFCOM), and the Defense Logistics Agency (DLA).

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[4] Dual-use refers to facilities or technologies that serve as a basis for both commercial and military products or use of those facilities or technologies.

1.5 Applicable Program Documents

The basic administrative guidance for the SM21 PMP was derived from the documents outlined in the documents table below. The SM21 specific documents that have been created by the time this document was written and their relationship to the present document are also described in Table 1 below. Additional documents will be added when developed.

Table 1 - Documents and Relationships to SM21 Program Management

Title Of Document	Purpose Of Document	Relationship To PMP
SM21 Joint Operational Concept Document (JOCD)	The SM21 JOCD presents the formal concept of a prototype JPPSP. It is the foundational document for the development of the JPPSP system, which is part of a broader military power projection system and dual use logistics support strategy. The JOCD establishes the project vision and defines how the JPPSP will operate as an integrated node within the end-to-end joint force deployment and dual use logistics distribution systems.	The JOCD provides the conceptual foundation for the SM21 JALTD.
Project Management Office – Operating Procedures PMO-OP	The administrative project management plan provides the program management administrative direction.	Provides the administrative direction for the overall management of the program and provides direction on the use of the PMIS.
DoD Extension to PMI's A Guide to the Project Management Body of Knowledge ("PMBOK® Guide").	The primary purpose of this document is to identify and describe defense applications of the core project management knowledge areas contained in the PMBOK® Guide, as well as those defense-intensive knowledge areas not contained in the Guide.	Provided the basis for developing the PMO-OP.
CJCSM 3170.01B Operation of the Joint Capabilities Integration and Development System (JCIDS)	JCIDS is the basis for the DoD Acquisition System. The JCIDS analysis process is a capabilities-based assessment (CBA) composed of a structured, four-step methodology that defines capability gaps, capability needs and approaches to provide those capabilities within a specified functional or operational area. The JCIDS process requires the assignment of a sponsor to support the analysis as early as possible.	The JCIDS guidance will be used to initiate the overall DoD acquisition process as deemed appropriate by the program sponsor. Selection of the appropriate sponsor is currently pending identification.

1.6 Concept of Execution and Transition

The SM21 JALTD will improve the effectiveness and the efficiency of commercial distribution logistics and military force deployment and sustainment operations through an improvement in information quality and business processes. The improved information quality will enable a collaborative distribution management environment supported by dynamic planning, re-planning, and execution tools. It will also provide deploying military units (the war-fighter) capabilities to directly improve force deployment decision-making and will make relevant force deployment

and sustainment distribution information available to authorized stakeholders. This information is not readily attainable to stakeholders today. The SM21 JALTD will provide the information required to make and support deployment and distribution decisions, which can be used or rejected, in part or in whole by the military or commercial logistics decision authority.

The SM21 JALTD is and will be driven by both military and commercial user requirements. It is outwardly focused on data integration with distribution stakeholders. Internally, the JALTD will tackle the challenges of commercial proprietary and sensitive military data. The JALTD will also tackle the challenge of information security among the diverse users, solve the problems of lexicon, and leverage an existing commercial and military network for system connectivity and reach back paths. The functional elements are identified in Table 2 below. The JALTD will ensure more complete integration of the commercial and military shipment stakeholders by receiving data inputs from the required commercial and military logistics systems and applying commercial off-the-shelf data translators to enable data integration with the JPPSP database. This will occur in a web-based environment where the information security challenges of a diverse user audience will be resolved. It will provide access to decision support information that is not currently available by employing commercially available data collection and information aggregation/generation methods. Further, decision support tools will be made available at the distribution node (JPPSP) to permit better nodal management of the distribution execution process. This development strategy will help develop the necessary tools that will help commercial firms and military shippers support DHS supply chain security programs, such as the Customs - Trade Partnership Against Terrorism (C-TPAT) that leverage information sharing in defense against exploitation of the supply chain for terrorist or criminal activities.

The SM 21 JALTD was initiated to address the primary logistics distribution shortfall created by stove-piped information management systems, outdated business processes associated with distribution logistics, and inadequate transportation infrastructure. SM21 will leverage modeling and simulation to support functional process improvement and to define infrastructure requirements. The overall objective is to provide more effective and efficient commercial and joint military distribution operations, made possible by improved information sharing, supported by integrated information management systems.

The SM21 JALTD Transition Period will primarily occur during the final year of the JALTD after the iterative period of demonstrations, utility assessments, and capability refinement. As a part of the transition process, the SM21 JALTD commercial capabilities will be offered for potential transition and full scale system development to the Southern California Logistics Authority (SCLA) and their contracted developer Stirling Airports International (Stirling). The SM21 JALTD military capabilities will also be offered to DISA for recommendations on potential post-development integration within the DoD Net-Centric Information Structure, which is conceptually depicted below in Figure 3. It is anticipated that SCLA, Stirling, DISA and ONR will be in the best position to provide technical "way-ahead" recommendations and guidance for potential full system development, transition, and integration.

In addition to the military and commercial utility assessments, evaluations will be performed on the following SM21 required capabilities during the course of the program:

- Architecture Interoperability / Integration

- Information Assurance / Security

- Bandwidth Requirements

- System Scalability

- JPPSP Agile Infrastructure

The military and commercial utility assessments and capability evaluations will be used to support the development of transition options and strategy.

Figure 3 - Potential Integration with DoD Net-Centric Environment
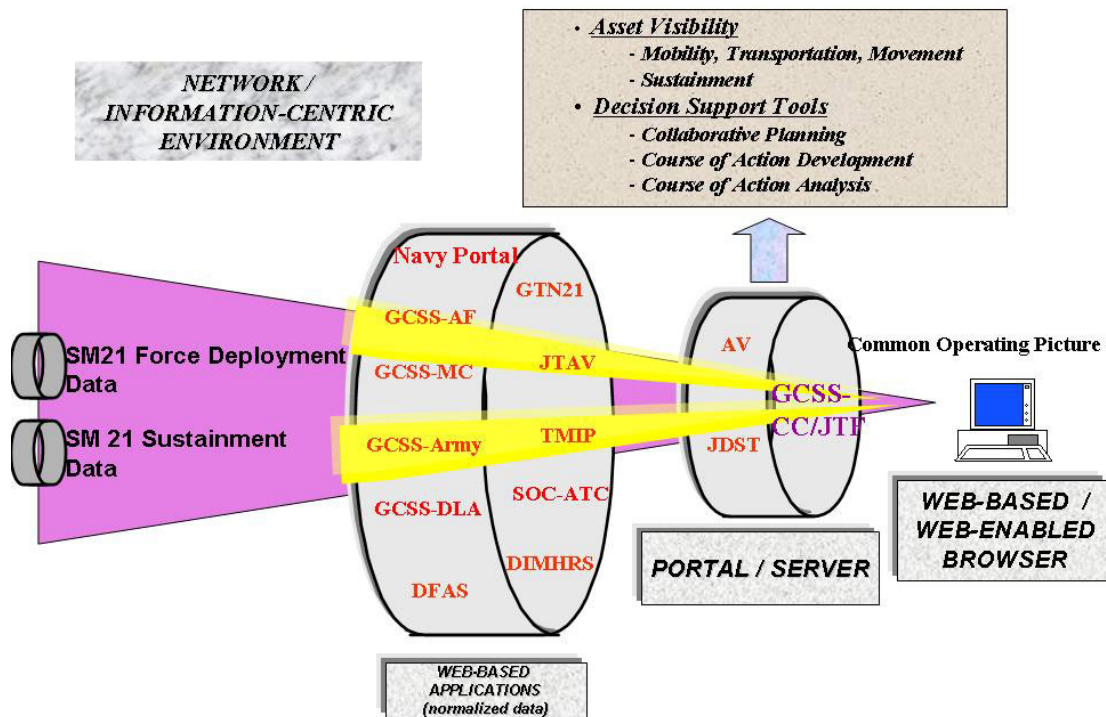
Table 2 - Functional Description of SM21 JALTD Components (Thrust Areas)

Components	Description
Distribution Decision Support Tools	Leveraging advanced commercial and existing military tools that provide the ability to plan and conduct optimization, sensitivity analysis, and dynamic re-planning to support commercial and military distribution logistics execution decisions.
Security Architecture	Recognizing the challenges of proprietary commercial and military sensitive data from multiple sources, this function serves as the "gatekeeper" to maintain the security access and related decision rules in the surrounding capability.

Components	Description
Network Infrastructure	Provides the connectivity methods and mechanisms to support data collection, information generation and sharing, and reach back.
Stakeholder System Interface Definition	Receives data from multiple, proprietary and commercial data sources, effects pre-processing for priority and lexicon uniformity, and translates data into relevant format for database integration. Creates and defines the SM21 logistics data environment. Defines the framework to accommodate and integrate varying levels of technology.
Agile Infrastructure	Enables advanced distribution and cargo handling and buffering processes and for rail, truck, and air shipments.

1.7 Military Need

Future expeditionary military operations will increasingly occur with little advance planning and can be characterized by new joint and coalition partnerships. As recent experience has shown, while the respective coalition partners are generally united by a common mission, they may be members of other alliances or former enemies, or may have little or no prior experience conducting combined military operations. From the onset of hostilities an almost immediate and unrelenting need for distribution logistics is created prior to the first unit deployment and the need does not end until years after redeployment of most US forces.

The combatant commander's success in rapid deployment and in the command's ability to make correct and timely distribution logistics decisions can easily be measured and witnessed in the worldwide media by the conditions on the battlefield and the welfare of the non-combatant population. Despite the known importance, the information necessary to support distribution logistics is not generally available at the execution level. Distribution logistics decision-making is primarily available only by manual means at the execution level. The data provided often lacks validity and relevance, which often hinders vice enhancing distribution logistics.

To generate robust decision support information for distribution logistics, SM21 must support the integration of data from commercial and joint military logistics systems.   Application of information technology capabilities and process improvement is necessary to provide seamless distribution logistics information for decision-making and dynamic re-planning between commercial and joint military systems boundaries. The insertion of technology and process improvement into the distribution logistics architecture at the JPPSP is a prerequisite for the combatant commander to make early value added decisions on distribution logistics through a standardized, automatic process rather than the current, often dysfunctional ad hoc methods.

In order to achieve this goal of generating relevant and accurate distribution logistics information and sharing it with the respective JPPSP stakeholders, the SM21 JALTD over the next four years is planned to demonstrate the following capabilities:
- Dual-use system(s) and decision support tools for the accurate tracking, management, and dynamic re-planning of force deployments, sustainment logistics, and commercial shipments across the full spectrum of commercial and military operations.

- User capabilities which will provide the following value added to the operational commercial and military logistician: Capability to dynamically re-plan and execute strategic deployment/redeployment, capability to re-plan and execute military sustainment and commercial shipment distribution, the capability to provide logistics infrastructure information, and capabilities to enhance the safety and security of shipments

- The combination of these capabilities is needed in order to address the multiple, current shortfalls regarding distribution logistics information and decision-making.

The SM21 JALTD will contribute to fulfilling the following mission needs identified in Focused Logistics Joint Operational Concept:

- *Information Fusion* – SM21 would support the goal of globally improving the timely and accurate access and integration of logistics data across forces and agencies to provide the warfighter relevant asset visibility and responsive access to logistics resources.

- *Joint Deployment/Rapid Distribution* - SM21 would support improving the process of moving multi-service units to an operational area coupled with the accelerated delivery of logistics resources through improved transportation and information networks providing the warfighter with greatly enhanced visibility and accessibility of assets from the source of supply to the point of need.

The SM21 JALTD will contribute to fulfilling these related mission needs and operational concepts that have been identified in Joint Vision 2020:

- *Interoperability* – support to maximize the synergy of compatible communications, common logistics items, sharing of services, and information sharing.

- *Focused Logistics* – support the ability to provide the joint force the right equipment and supplies in the right place, at the right time, and in the right quantity, across the full range of military operations. SM21 would support this through a real-time, web-based information system at the JPPSP providing total asset visibility as part of the node's common relevant operational picture, effectively linking military shipments and commercial transportation systems and terminals.

- *Joint Command and Control* – SM21 will support maximizing the impact of decision making by leveraging information superiority. This need is increased when the demands of future interoperability and multinational operations are considered.

1.8 The SM21 Military Component

Resident within the dual use inland facility will be the SM21 concept of the JPPSP, which is the military component of the SM21 concept. The JPPSP represents an opportunity for DoD to partner in the development of future port facility templates, which includes a data integration process based on existing commercial practice. As a military capability, SM21 is a transformational enabler helping to achieve JV 2020 deployment and distribution capabilities. The JPPSP concept is more fully described in Annex A: ICD.

From a DoD force projection standpoint, SM21 leverages many current commercial and military

concepts, infuses them to create desired Joint Functional Concept capabilities by use of emerging technologies and processes to change the focus of force projection operations from mobilization at installations and depots to flexible and responsive support from ports of embarkation to the war-fighter executing expeditionary operations. The process changes will result in more regulated shipment flows, which are predicated on the warfighter's requirements.

The JPPSP represents a node within the envisioned Joint Deployment and Distribution Enterprise (JDDE) to manage and regulate the deployment and distribution flow as envisioned in the Joint Logistics (Distribution) Joint Integrating Concept. The JPPSP will be developed as a prototype node, which can be used to determine requirements and capabilities for other similar nodes (like a Sea Base, Intermediate Staging Base (ISB), Theater Distribution Center (TDC), etc.). The JPPSP can be the CONUS anchor to the JDDE, as the JDDE is developed to support forward deployed forces.

The basic mission of the JPPSP, as a <u>node</u> in the JDDE, includes support for the following:
- Deployment of the joint force
- Sustainment of the joint force
- Operation of the JPPSP

The candidate functional concepts of a JPPSP are:
- The coordination of the control of traffic out of (and in to) CONUS, to be responsive to COCOM support requirements and campaign plans.
- Marshaling, staging, and organizing traffic for onward movement (Buffering, Effective Conveyance Loading)
- Synchronization of deployment and sustainment operations with reception activities in COCOM.
- Integrating Non-DoD partner IT systems and products into DoD IT networks as appropriate.
- Allowing Non-DoD partners access to DoD IT systems and products as appropriate.
- Providing accurate ITV data on shipments as they enter, are temporarily held, and as they leave the JPPSP.
- Ability to access and operate in both secure and non secure IT environments required to operate the Victorville facility and ports within the region.

The dual use facility requirements[5] include the potential need for:
- A rail deployment support facility
- Multi-modal terminal facilities
- A mega-rail switching facility
- Holding facilities (Warehousing, Marshalling Yards, Container Yard, Staging Areas, etc)
- Buffer sustainment stock management facility to support the DOD Sea Basing and Sense and Respond Logistics concepts
- Trans-loading facilities (mode to mode and intermodal) for air, sea, and surface movements

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[5] Requirements will be refined during the current and subsequent program years to help define the transition requirements.

- A military Deployment and Distribution Operations Center

Primary SM21 DoD Mission – Operate the JPPSP to:
- Assure access to strategic ports
  - o Provide deployment process support operations
  - o Provide sustainment process support operations

SECTION 2

2.0 Overall Approach

2.1 Program Four Year Phase Structure

The SM21 JALTD will be a four-year (Fiscal Year 2005-2008) effort consisting of three years of requirements definition and refinement, capability development and integration, and utility assessments through demonstrations and experiments followed by a one year technology transition effort. This effort has been further time divided into the phases outlined in the figure below and in the following paragraphs.

Figure 4 – SM21 Joint Advanced Logistics Technology Demonstration Time Line
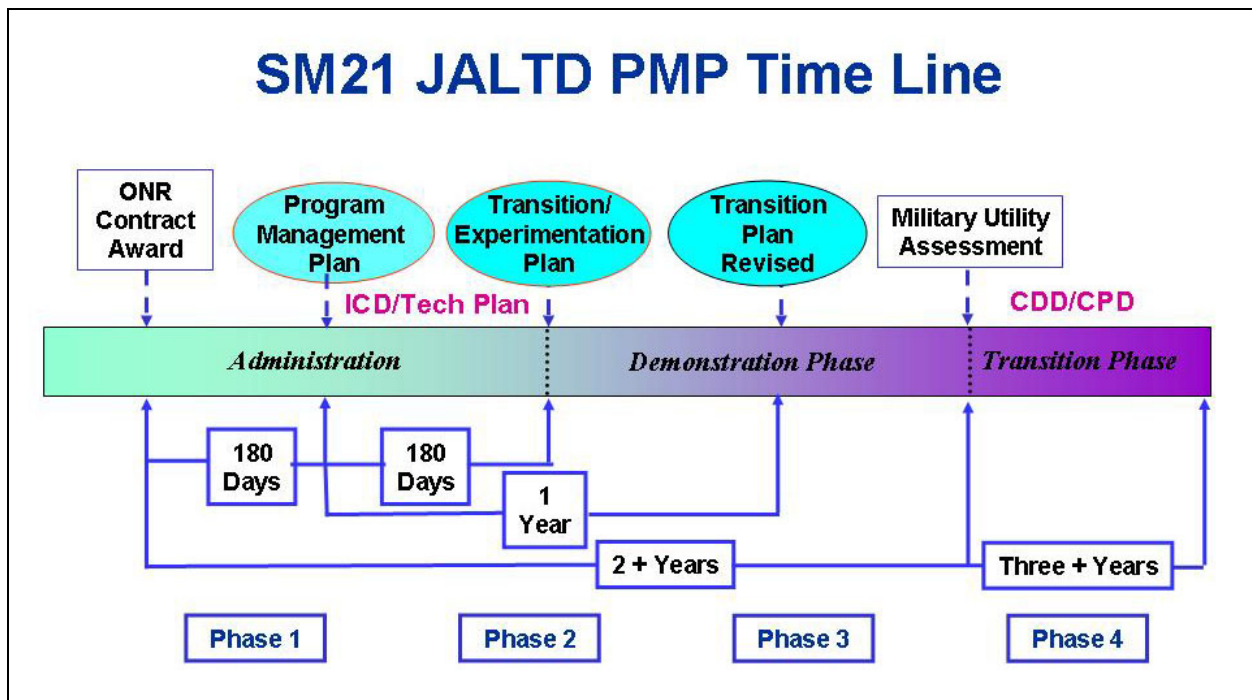
Phase 1: Calendar Year 2005- 2006[6]: Focus is on simulation, and initial experimentation and demonstration to identify the requirements and gaps associated with a prototype dual use distribution facility at Victorville. During this Phase an initial force deployment capability demonstration is being planned in cooperation with the Agile Port System program. A final decision on the demonstration is dependent on USTRANSCOM identifying an appropriate deployment opportunity.

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[6] The Calendar Year 2005-2006 program is associated with the FY05 funding allocation but is actually conducting work in FY06. All fiscal year references are associated with the Federal Fiscal Year.

Phase 2: 2006-2007: Regional military deployment or redeployment demonstration and power projection network simulation extended to incorporate Fort Irwin (Yermo and Nebo USMC Logistics Base) and other Power Projection Platforms and continued system development, experimentation, and demonstration. Extension of the Southern California Agile Supply Network Model to encompass other major trade corridors (San Diego Trans Border, Central Vale, and Northern California); nodes (San Joaquin, Concord); and to multiple Power Projection Platforms and Seaports/Airports of Embarkation as precursor for the Phase 3 Demonstration involving a second JPPSP and one or more SPOE/APOE.

Phase 3: 2007-2008: The Web Portal and User Interface will be finalized and deployed for operational testing during the third year. The Web Portal will be designed to integrate applications software, data sources and users. Operational testing of the portal will be by Fort Irwin, the National Training Center, selected commercial shippers and subsequently other power projection platforms and commercial users during the course of the year. Additionally, as desired by DOD, a Power Projection Support Platform network demonstration involving the physical movement of DOD equipment from different origins around the country through the Victorville JPPSP node to one of the Southern California Strategic Ports will be conducted. Alternatively, a commercial demonstration will be completed along with an advanced simulation of military movements.

Phase 4: 2008-2009: Transition and deployment involving multiple power projection platforms and one or more Strategic Ports in Southern California

2.1.1 Stakeholder Demonstration Participation

Although not officially designated, the primary military stakeholder for SM21 has been identified as USTRANSCOM and its subordinate command – the Surface Deployment and Distribution Command (SDDC). Several planning meetings have been held with USTRANSCOM and SDDC to develop the initial capability demonstration planned for the spring of 2007. Additional potential demonstration stakeholders include the Joint Forces Command (JFCOM), the Defense Logistics Agency (DLA), and the Service components. This population will be the source of functional requirements and will serve as a continuing and direct source of refinement feedback during the JALTD development and demonstrations. In addition to military demonstrations, the SM21 JALTD commercial capabilities will be demonstrated and refined. This effort will provide a continuous feedback linkage enabling capability refinement. The demonstration and refinement process will be accomplished, as feasible and appropriate, in conjunction with: the Southern California Counsel of Governments' goods movement and inland port study efforts and the following DoD ACTD programs: the DLA Nodal Management and Deployable Depot (NoMaDD)) and the JFCOM Joint Force Projection (JFP) ACTD program. Refer to paragraph 11.0 Technical Management and subordinate sections for additional details on the potential joint ACTD efforts.

During each year in the FY05 to FY08 timeframe, an assessment event will be conducted. For FY 05, the primary focus will be the attainment of capabilities for planning and executing strategic deployment and sustainment distribution with a PNW force deployment demonstration as the assessment event. FY06 through FY08 assessment events will be planned during the FY05 effort.

2.2 FY05 Task Relationships and Integrated Product Teams

As stated in the current SM21 Proposal, the purpose of this year's SM21 JALTD is to "finalize a design and evaluate the military utility of a dual use, military and commercial, agile port system (APS) within the Southern California Regional Freight Network." To accomplish this end we are guided by the approved SM21 Vision and Scope Statements available on the SM21 PMIS and the foundational documents discussed below.

The SM21 2005-2006 program is composed of 21 tasks and associated deliverables, which are documented in the approved ONR Statement of Work. To achieve the JALTD purpose, as defined above, the relationships of the 21 projects must be properly established, understood, and managed within the program management structure. The current year SM21 JALTD program starts with the refinement of last year's SM21 - ONR sponsored effort that produced the SM21 JOCD as the primary product. The JOCD was used as the basis for the development of the Initial Capabilities Document (ICD) (Annex A). Thus the foundational documents to guide work the overall program work and the individual projects during this phase of the SM21 JALTD program are:

- The ONR issued Statement of Work.
- Team member Statements of Work issued by the California State University, Long Beach.
- The Joint Operational Concept Document
- This Project Management Plan including:
    - Annex A: Initial Capabilities Document
    - Annex B: Technical Plan and System Engineering Plan

The deliverables associated with the first four tasks provide the program management foundation as outlined below. These living documents and procedures will guide the management of the four year JALTD:

- Integrated Project Management Structure: defines the Integrated Product Team structure and establishes the Project Management Information System (PMIS)
- Project Management Plan: provides the top-level description of the demonstration with sufficient detail that the vital objectives, approach, critical events, participants, schedule, funding, and transition objectives are understood and (by endorsement) agreed upon by all relevant parties. Measures of evaluation, to be considered in addressing performance and effectiveness, are defined.
- Initial Capability Document (ICD) – Annex A to the Project Management Plan provides the SM21 Operational Design Guidance in the format of an ICD.
- Technical Plan – Annex B to the Project Management Plan provides the basic technical processes associated with the project, outlines the technical objectives, and provides the systems engineering process.

In a manner similar to the project management tasks, the JLATD modeling and simulation (M&S) tasks have been established to evaluate and define the required capacity for the JPPSP infrastructure. The same tasks would also support the development and evaluation of business processes and functional process changes. These M&S tasks will support the JLATD systems

engineering plan, system architecture development, and development of the foundational system infrastructure specifications. The three separate but complementary M&S and evaluation projects have been programmed as outlined below:

- Southern California Agile Supply Network (SCASN) Model – The development of the SCASN model includes two projects. The first project, CLIN 0005, provides the basis for the development of the model by establishing the regional network defined as a series of connected nodes and arcs. The model is developed as a separate project as defined in CLIN 0016. Once developed and validated the model will be subsequently employed to evaluate the SCASN distribution flow rates and identify choke points during network optimization work. The output of the SCASN model will be used as input to the multi-modal terminal model.
- Multi-Modal Terminal Model – The multi-modal terminal model development project is defined in CLIN 0014. This model is designed to establish and evaluate the required multi-modal operations and cargo handling processes for the Victorville JPPSP. The model will also be a primary tool for developing the Terminal Specification in a separate project defined in CLIN 0008. The output of this model, terminal cargo throughput, will be used as input to the SCASN model.
- Rail Network Model – The rail network model project is defined in CLIN 0006. This project leverages an existing rail network model developed specifically for the Southern California region. The output of this model, average delays and flow times of the trains, will be used as input to both the SCASN and the multi-modal terminal model.

As outlined above, the output of the rail network model in terms of average delays and flow times of the trains will be used as input to both the SCASN and multi-modal terminal models. Likewise, a data exchange process will be established between the SCASN and the multi-modal terminal models. Interfacing the three models from a date interchange standpoint is necessary to ensure that a true network capacity and flow rate is determined. Optimizing one node or arc does little good. A balance is needed within the end-to-end network. The three SM21 models are being employed to ensure this balance.

All 21 program tasks (projects), including the program management and M&S projects, have been organized functionally within an Integrated Product Team (IPT) structure as defined below and as overviewed in Figure 7. The Technical Plan (paragraph 2.0), provides a detailed overview of the IPT and Project level associations with identified commercial and military distribution capability gaps. The IPT structure overview follows:

Integrated Product Teams: IPT Team Leaders are assigned to each IPT and are responsible for collecting the monthly status reports (Decision Papers) and aggregating results. While the IPT leaders may informally provide technical advice, their primary duty is to provide administrative and reporting support to the task teams in their IPT. IPT Team Leaders will aggregate the Project Manager Work Breakdown Structures (WBS) for their IPT and ensure the WBS is properly entered on the PMIS website. The SM21 organizational and IPT structural chart is included as Figure 7. The functional overview of each IPT is provided below:

- Program Management Plan IPT**:** Contains tasks that coordinate the program's project operations and develops the overall project and transition report.

- Information Fusion & Network IPT: Contains tasks that provide foundational research or produce the enabling capabilities outlined in this PMP, to include SM21 JALTD Decision Support Tools for design and analysis of alternative capability approaches.

- JLETT, Sea-basing, and SRL IPT: Contains tasks that establish relationships of the SM 21 project with other communities that have similar interests or working on similar issues. This IPT has the lead for the Experimentation and Demonstration Plan. It also works collaboratively with Commercial and Academia Transition Plan Leaders to lead the development of the final combined Commercial, Academia, and Government Transition Plan.

- JPPSP IPT: Contains tasks that focus on producing operational capabilities. These tasks focus on defining specific facilities and developing specific capabilities by applying enabling technologies developed within the project especially the Information Fusion and Network IPT.

SECTION 3

3.0 Programmatic and Organizational Approach

3.1 Program Management

3.1.1 General Approach

The SM21 JALTD will use several Integrated Product Teams (IPT) and control mechanisms to manage the program and technical engineering development of the project. A detailed work breakdown structure (WBS), the Program Management Office Operating Procedures (PMO-OP), and the Project Management Information Management System (PMIS) are the primary tools and documents used to manage this program. The WBS, PMO-OP, and PMIS will be used to monitor and control the program and system engineering activities. Each IPT has an assigned IPT leader. Projects (associated with CLIN Level Deliverables) are assigned to each IPT. Individual project managers are assigned to each project. The IPT and project structure is provided in Figure 7.

3.2 Requirements Management

3.2.1 General Approach

The SM21 JALTD functional and technical requirements, including derived requirements, will be captured with customer involvement and documented in initially in plan language. However, all requirements will be documented in Unified Modeling Language (UML) using Enterprise Architect as the UML modeling support tool. Requirements Change Requests will be documented and controlled as a part of the configuration control management process documented in the PMP - Administrative. Any derived requirements for individual components will be added to the requirements as they are obtained from the military and commercial component providers. The establishment and maintenance of the system requirements is the responsibility of the Technical Committee.

3.2.2 Project Requirements

The requirements, which will be reviewed by the Technical Committee through the use of the PMIS, will contain all requirements given in the project Statement of Work (SOW) or developed by other committees or project members during the Demonstration Planning and Assessment process. The requirements will be updated with approved Requirement Change Requests (RCRs). This list will be inspected and coordinated with all affected project elements. The establishment and maintenance of RCR is the responsibility of the CTO.

3.3 System Engineering Integration with Overall Program Efforts

The Technical Plan-Systems Engineering Plan (SEP) (located at Annex B) has been developed as an integrated component of the overall SM21 PMP. The SEP addresses the systems engineering parameters of the SM21 project and describes the general technical approach to the

program. The overall SM21 administrative project management approach is based on the Project Management Institute (PMI) Project Management Standards as supplemented by the Department of Defense to comply with the Joint Capabilities Integrated Development System (JCIDS) procedures. The relationship and feedback mechanisms between the systems engineering and key program management processes along with an overview of the SM21 Project Management Tools and Standards is provided in the diagram below.

Figure 5 – SM21 Project Management Tools and Standards
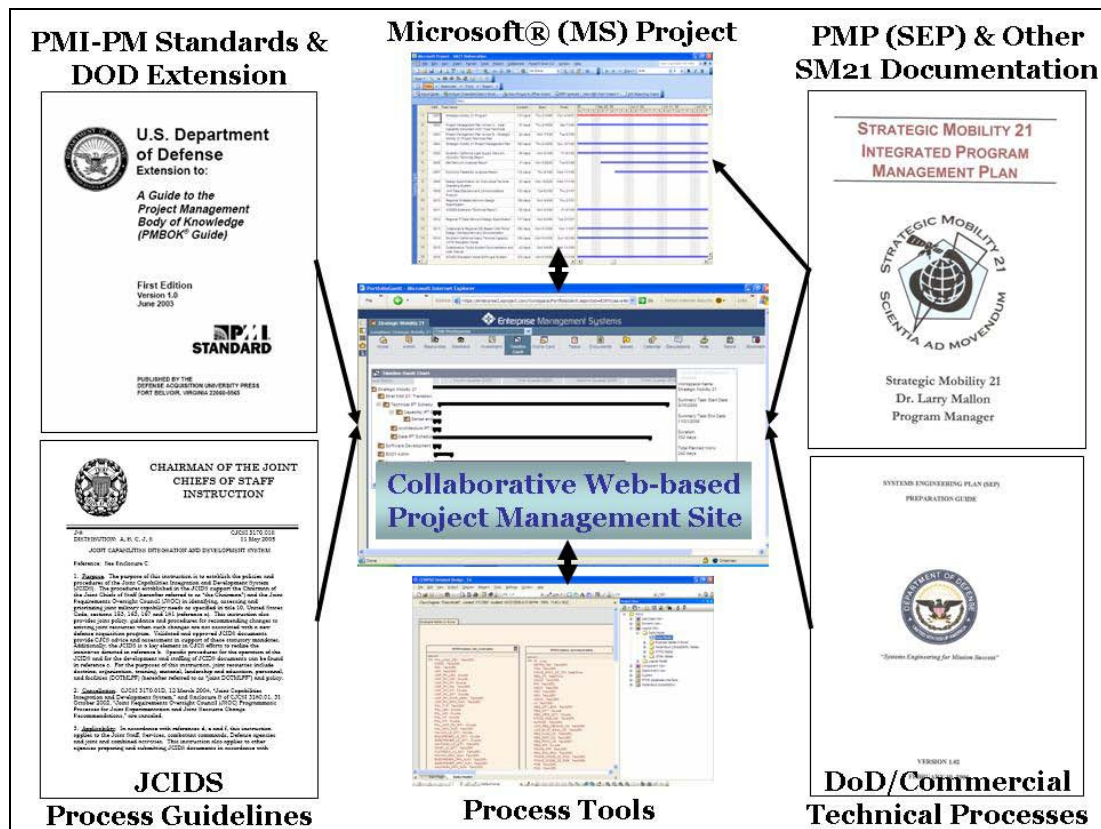
3.3.1 Systems Engineering Processes

The following elements are key components of the SM21 systems engineering and program development process:

Trade Studies detailed in Annex B, paragraph 2.3.10 will support the development of the SM21 Experimentation Plan**.** Trade Studies will be conducted among operational capabilities, functional, and performance requirements, design alternatives and their related manufacturing, testing, and support processes; program schedule; and Lifecycle cost. Such trade studies will be an integral part of the Experimentation Plan and will be made at the appropriate level of detail to support decision making and lead to a proper balance between system performance, timeliness of creating an initial JPPSP capability and cost. As the SM21 ALTD program has already experienced, requirements from the many program stakeholders and sources can often conflict

with each other. Trade studies are used for the resolution of these conflicts.

Experimentation, as noted above, will be conducted as a part of trade studies to support decision making and the proper balance between system performance expectations, timeliness of creating an initial JPPSP capability, and cost. Since experimentation and trade studies are linked in the SM21 program, experimentation will support a defined purpose and will not be conducted as an activity with little value to the system development process. It is common within DoD to conduct activities labeled as experiments that contribute little to DoD strategies, system engineering decisions, or to the body of knowledge in general (Alberts, 2002). In addition to the experimentation controls contained within the SM21 SEP, the Code of Best Practice for Experimentation will be used as a reference guide during experimentation planning.

The SEP will also support and define the overall SM21 **Modeling and Simulation Plan.** As the DoD continues its transformation, it is attempting to rely more and more on network centric operations and on individually-complex systems linked together in complex systems-of-systems relationships. This transformation increases the dependency on seamless interoperability. However, this situation, of seamless interoperability, does not exist today despite the best efforts and intentions over the years. Today's distribution management systems are largely stove-piped applications with low data quality. Interoperability is needed between distribution systems across military service and national boundaries, and requires effective performance by each individual transportation and distribution system. Modeling and Simulation will be used to identify and work to resolve interoperability issues at the seams between systems in complex system of systems relationships.

The SM21 SEP will develop a process to exploit the programmed modeling and simulation efforts to rapidly field JPPSP capabilities with sufficient confidence that the fielded capabilities will perform effectively in the system-of-systems joint mission environment. The goal is to gain as much value from the modeling and simulation effort as possible with a focus on supporting systems design, trade studies, financial analysis, sustainment, and performance assessments.

One area that is especially important for systems engineering to contribute to is that of **Risk Identification and Mitigation**. The information produced during the trade studies in the stage review effort, especially in the review of developed business cases, will lead to the identification of the elements of the system which entail larger degrees of risk. Such risk may be of many types including:

1. Cost
2. Schedule
3. Integration
4. Resistance to business process change
5. Technological immaturity

The program system engineer will develop, maintain and periodically republish a list of identified risks. Program management in conjunction with the program system engineer will develop the risk mitigation strategy for each of these risks. Risk mitigation is likely to include one or more of the following elements:

1. Early prototyping
2. Refined Requirements and Concepts leading to a better understanding of the risk
3. Additional program focus on the risk area through additional funding or personnel
4. The conduct of special studies or assessments to further quantify the risk

3.4 Development Strategy

3.4.1 General Approach

The SM21 JALTD will use a phased approach to deliver incremental capability leading to the full program identified capabilities. An agile development model will be followed to provide a series of evolving development experiments and demonstrations, to be detailed in the SM21 JALTD experimentation plan to be maintained on the PMIS. The underlying technologies to be a part of the experimentation and demonstrated process will potentially include decision support tools. Additional decision support tools may be contributed by participating commercial and military partners.

It is anticipated that the evolving SM21 JALTD capabilities will be demonstrated and tested by USTRANSCOM during at least one force deployment event. Coordination is currently underway with USTRANSCOM to develop demonstration objectives for the first SM21 JALTD demonstration to be held in conjunction with a force deployment in the PNW. The project would be a cooperative effort between the SM21 JALTD and the CCDoTT APS project as previously described.

Working with ONR, the SM21 JALTD program will continue to coordinate additional formal cooperative agreements with the Joint Forces Command – Joint Force Projection ACTD and the Defense Logistics Agency - Nodal Management and Deployable Depot ACTD (NoMaDD). The process for establishing the formal agreements has been identified as the establishment of a Memorandum of Agreement (MOA) between ONR and the DoD Supporting Agency. A timeline for establishing the individual MOA will be arranged with ONR. The two potential cooperative ACTD programs are summarized below:

Joint Force Projection: The JFP ACTD will demonstrate the technologies and operational concepts necessary to provide combatant commanders with the tools, decision aids, and processes needed to support the analysis, planning, execution, and assessment of force projection for a joint capabilities-based force. Before sufficient control over the deployment and distribution pipeline from end-to-end can be exercised, the stove-piped processes, systems, and data underlying the pipeline must be integrated. The product will be a single, integrated force projection picture that links operators and logisticians at Service, Joint, and Agency levels by using real-time, web-based, and network-centric information systems. The associated processes, Concept of Operations (CONOPS), Joint Tactics, Techniques and Procedures (JTTPs), and tools will be combined to support the U.S. Joint Forces Command (USJFCOM) Joint Force Projection vision.

Nodal Management and Deployable Depot: The NoMaDD ACTD implements a deployable end-to-end ("factory-to-foxhole") distribution system, including asset visibility using radio-frequency identification. NoMaDD has been design to:

- Provide Combatant Commands (COCOM) / Agencies / Services situational awareness of the sustainment distribution pipeline

- Provide a more complete assessment of the logistical situation

- Enable information management by exception capability to filter the quantity of logistics data

- Provide tailorable / flexible depot systems

- Provide available Joint Distribution Capability – trained, resourced, packaged and ready for deployment

The figure below provides an overview of the ACTD scope, which provides visual insight on the potential fit between SM21 JALTD and the NoMaDD ACTD.

Figure 6 - Nodal Management and Deployable Depot ACTD
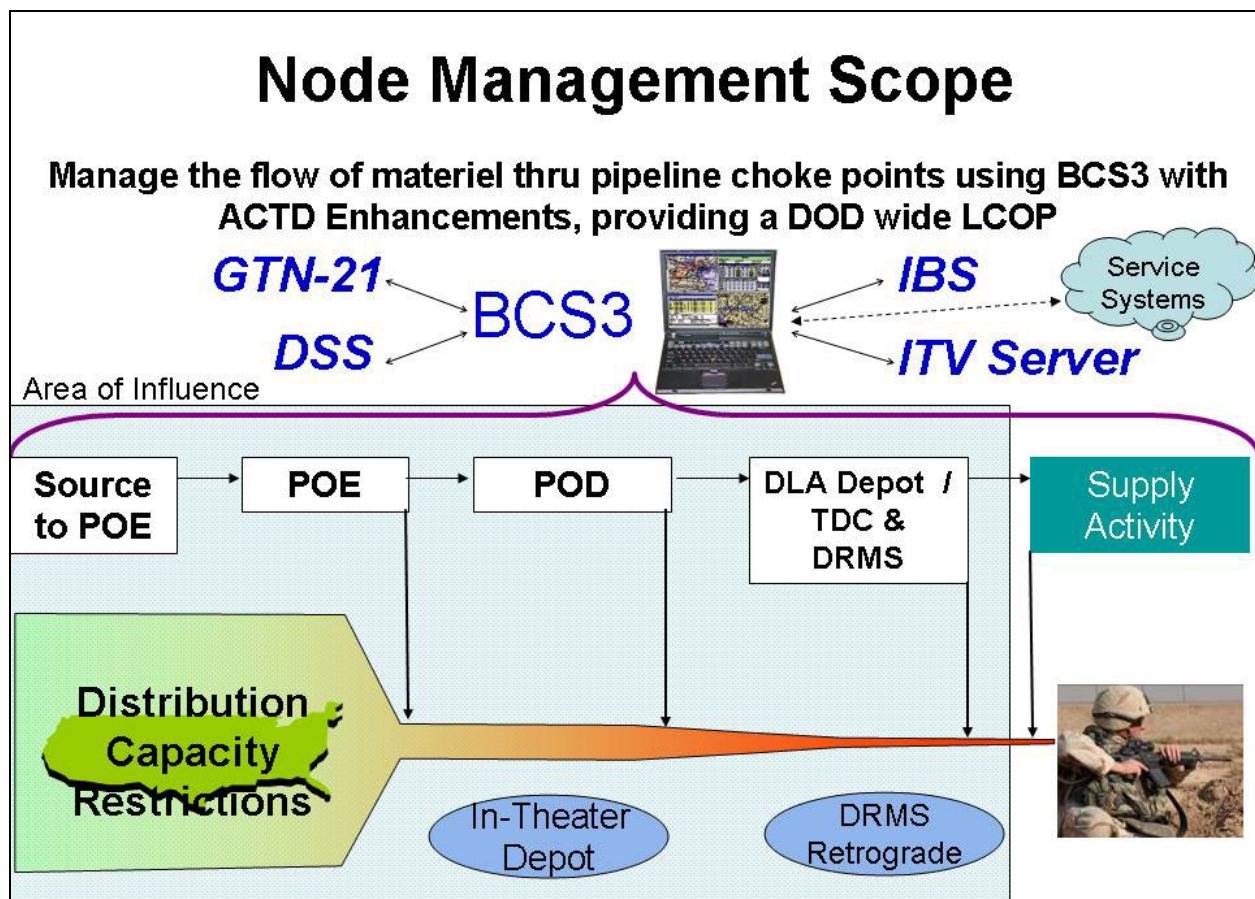
An additional cooperative effort will be pursued with the Defense Information Systems Agency (DISA). The DISA Global Information Grid Enterprise Services Engineering directorate (GE) has broad responsibilities for the rapid transfer of technologies to the war-fighter. Within the GE

directorate, the Advanced Concepts and Technology Division provide technical management for DISA's Advanced Concept Technology Demonstration's (ACTD) program. ACTDs facilitate the rapid transfer of advanced information technology from research and experimentation stages to deployment and full-scale implementation within the DoD Global Information Grid (GIG).

A cooperative agreement will be considered through negotiation with several commercial stakeholders and partners as outlined below:

Boeing Corporation and SM 21 have entered into a mutual non-disclosure agreement as a pre-requisite to a Memorandum of Agreement. Boeing is already a major tenant at the Victorville facility involved in aircraft maintenance and certification and a prime candidate to utilize SM 21 Global Logistics and Security Academy education, training, and workforce development capabilities. It is anticipated that this arrangement may emerge as a model for other similar agreements with individual companies or consortia. Under the agreement Boeing is expected to provide access to state of the art modeling and simulation facilities in Anaheim, California, and test and experimentation facilities for aircraft loading in Long Beach, California, access to the Boeing maintained Iridium satellite network for end to end tracking of DoD shipments, joint evaluation of emerging technologies such as the Joint Modular Intermodal Distribution System (JMIDS) and the 5QuadPOD$^{Pat\ Pend}$ (5QP) System and co-development of joint capabilities such as the application of ICODES intelligent agent technology to aircraft stow planning replacing ALPS software in the military and eventual commercial multi-modal environment at the Victorville site. The Boeing - SM 21 agreement may also provide for part time personnel assignments and exchange opportunities.

Inteligistics: Class VIII distribution processes as a forum to address larger deployment and distribution capability gaps associated with the Joint Deployment and Distribution Enterprise (JDDE). Specifically, SM 21 would employ the technologies involved in developing the 5QuadPOD$^{Pat\ Pend}$ (5QP) system as a warehouse in motion to provide significant enablers across numerous deployment and distribution programs associated with the JDDE with an initial emphasis on Class VIII distribution. The intent is to experiment and demonstrate different aspects of the 5QP system that will fill capability gaps identified during the SM 21 capabilities based assessments. Additionally, the SM 21 JALTD with Inteligistics will explore the possibility of future demonstrations focused on how the 5QP system, or a subordinate component, can enhance force deployment capabilities. The belief is that the system can reduce the footprint of deploying units, particularly of theater opening packages. Reconfigurable containers, with nested inventory control technology have the potential to reduce the current Reception, Staging, Onward Movement and Integration (RSOI) time. Additionally, the 5QP system would reduce the time to inventory parts as units draw pre-positioned stocks and provide the appropriate sized container configurations to transport stocks once issued from TEU sized pre-positioned containers. Finally, the 5QP system also provides insights into creating technologies that improve our abilities to seal and track containers (critical to securing the global supply chain) by providing robust sensors and software support for management of 5QP containers and their components.

Savi – Lockheed Martin: The SM21 JALTD is working with Savi to establish a cooperative agreement to develop improved use of RFID for force deployment and sustainment distribution.

Business process re-engineering related to the integration of RFID is a major part of this potential cooperative agreement.

3.5 Operational Demonstration Requirements

3.5.1 The Plan and Execute Strategic Force Deployment Requirement

This requirement is focused on those capabilities needed for planning, execution and dynamic re-planning of strategic force deployment for a joint military force. Currently, joint forces possess minimal requisite information to effectively plan, dynamically re-plan and execute strategic force deployment and have extremely limited ability to determine the status, capability, capacity and availability of assigned and supporting commercial and military distribution infrastructure and assets. This makes them unable to effectively prioritize the requirement for movement of unit equipment, and sustainment.

This SM21 JALTD requirement will enable the war fighter to:
- After identification of lift requirements, aggregate the requirements into a Joint Strategic Lift Loading Plan at the unit level for movement from Power Project Platforms (PPP) or other military unit location to the final strategic lift stow location.

- After completion of movement scheduling by the commercial and military lift providers, permit visibility of the scheduled force deployment by all role-based authorized stakeholders in the force deployment process.

- Have visibility of the location and status of deploying units from the origin of the unit force deployment process (PPP) through the Port of Embarkation (POE) as a fixed point of known reliable flow information within the JDDE system.

- Enable dynamic replanning of the deployment process for supported deploying units

3.5.2 The Plan and Execute Sustainment Distribution Requirement

This requirement revolves around planning and executing sustainment distribution for a deploying and deployed theater joint force. Currently, there is no effective execution support and performance based logistics monitoring capability for in-transit sustainment shipments direct from vendors, DLA depots, and the individual Service depots.   Demonstration of this requirement, effective execution support, will provide the ability to monitor and dynamically re-plan joint sustainment distribution requirements for selected classes of supply and field services in support of sustainment operations. It will provide a joint force in-transit visibility "view" that would be accessible at the operational and strategic levels and if deemed necessary, at the tactical level as well. The dynamic re-planning would enable diversion and in-transit merge capability at the JPPSP multi-modal distribution node.

The SM21 JALTD requirement will enable the joint war-fighter to:
- Capture in-transit visibility data from DLA and service components via data integration with existing commercial and military sources where feasible.

- Provide capability for services and DLA to feed data into the integrated SM21 data environment to enable execution monitoring.

- View, query, and re-direct joint force sustainment in-transit using a common operating picture.

- Be able to recognize changes from planned to actual in execution of sustainment distribution and react to these changes through dynamic re-planning.

3.5.3 The Logistics Infrastructure Information Requirement

This requirement is designed to provide logistics infrastructure information within a joint environment. Initial joint force deployment planning and subsequent operational planning lacks accurate, current information about the key features, capability, capacity and status of relevant transportation/distribution infrastructure. Similarly, the commercial sector often lacks key information concerning movement activities of their shipments while transiting the global supply system, information that for security reasons, those involved in ordering and shipping cargos will become increasingly accountable for, even though they do not provide the physical assets or plan the movements between origin and destination. This requirement will highly leverage existing government and commercial infrastructure visibility and planning systems to satisfy this requirement.

- Demonstrate the ability to provide data/information (visual and digital) on the capacity status of relevant distribution infrastructure within the Southern California Region.
- Success in this requirement will enable military commanders and other government emergency response agencies to obtain the best available infrastructure information on ports, airfields, rail yards, staging and assembly areas and ground lines of transportation to support and sustain the movement of forces and equipment and other emergency situations.
- When attained, this SM21 JALTD requirement will enable the war-fighter and emergency workers to:
  - o Integrate logistics infrastructure data from multiple national, state, and local sources into a common data environment.

  - o Have responsive query capability of logistics infrastructure information to support current (situational awareness) and future operations (planning) decisions in a collaborative environment.

  - o Monitor logistics infrastructure utilization in a manner that identifies problems before they become mission critical.

  - o Rapidly develop courses of action before logistics infrastructure utilization exceeds capacity in a collaborative environment.

SECTION 4

4.0 Communication Management Plan

The communication management plan defines the policies and procedures established to enhance the collaborative flow of information throughout the project. The SM21 program is a complex organization with the combination of research, academic, and commercial entities contributing to the whole. Effective communication is required from two perspectives:

1. As a required component of the program contracts – Customer or Sponsor reports and briefings.
2. Collaboration and communication among and between external program teams and internal project teams to achieve all SM21 program objectives.

As a primary component of communication, the Project Management Information System (PMIS), managed by the Program Management Office, has been deployed. This online project management application provides a wealth of tools and applications to capture, share, report, and collaborate on all aspects of the program.

The PMO was established to assist in the overall project management with a focus on the set-up, training, use, and maintenance of the PMIS. The PMO will maintain the PMIS and offer assistance in the use and effective management of the program components as well as manage reporting and tracking. The PMO is not intended to be a gatekeeper, but to enable an authoritative source and repository for all program status, documentation, and program direction.

4.1 SM21 Management Structure

The organization of the SM21 program is agile and flexible. It is a mixture of academic and commercial entities, organized into individual projects (CLINS), which are further organized along both functional lines (Technical, Transitional, Program Management), and relational lines (PMP; Information Fusion/Networking; JLETT, SeaBasing, and SRL; and JPPSP) for administration. Typically an individual will work on both multiple projects and within a project with multiple organizational representatives. Thus a loose matrix structure has been developed to define relationships by function and by common thrust. Responsibilities are defined through Statements of Work between the Program Manager and the Individual Sub contractor organizations.

The basic management structure is led by the Program Manager. He is advised by Special Advisors. They are individuals with specific skills to provide staff assistance to the Program Manager and support tasks with informal guidance within their area of expertise or responsibility. The Special Advisors, along with the IPT Managers will form the core of Functional Committees that will provide peer guidance to individual Projects, and provide the first review of Project deliverables. The Functional Committees provide the guidance of a technical nature to the Project leads as needed. The committee structure and processes are contained in the PMO-OP. Integrated Product Team managers are responsible for organizing

and supporting the project teams (CLINS) within their IPT. Project Managers are responsible for the execution of their project and final deliverable to the Program Manger for submission.

The organization chart below displays the key management structure. This includes the management team, oversight and sponsors, as well as the program breakdown by integrated project teams, CLIN Project Managers as well as a color key to indicate the subcontractor responsible. The current version of this chart will be posted on the PMIS web site with names of individuals in current leadership roles.

Figure 7 – SM21 Program Organization Chart
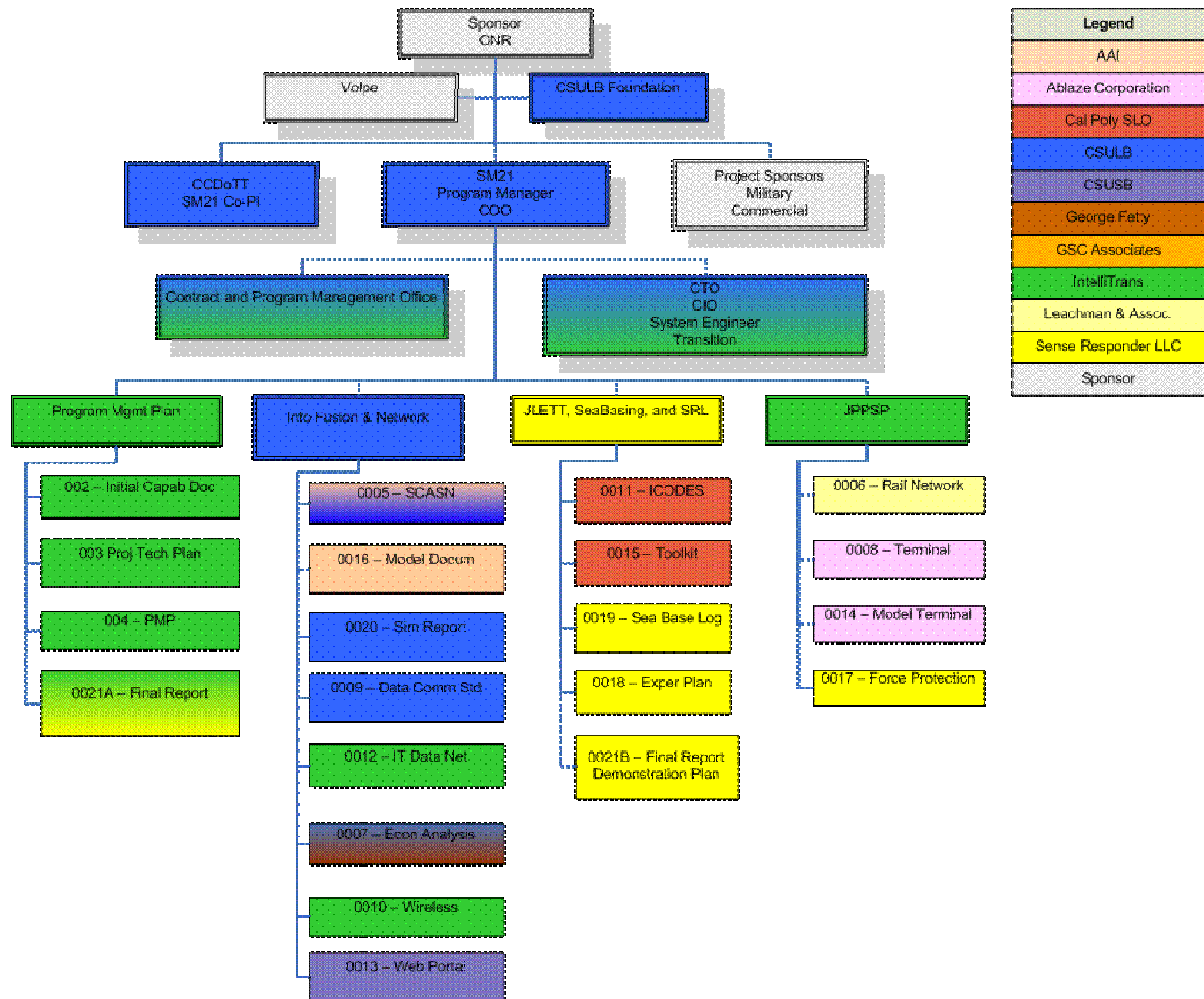
As this program is made up of several organizations, individuals will be responsible first to their employer, then IPT Manager for contributions to this program. Each organization, as prescribed in their SOW, will be responsible for the tasks assigned in the SOW. Each organization has provided a management point of contact as well as a technical point of contact for communications regarding the program.

4.2 Project Management Information System

The PMIS is a web based tool used to manage all aspects of the program while acting as the primary and official repository for program and project information. The SM21 program is set up with the hierarchical structure of the program. The IPT/CLIN and management structure organization is outlined in Figure 7, the Organizational Chart. This PMIS structure enables individual project management as well as roll-up reporting to the IPT and program levels. This section discusses the basic components of the PMIS application from a generic perspective.

The PMIS URL is: http://enterprise2.eproject.com/

The user guide is located in the following directory: Documents > Organization/Management > eProject User Documentation

4.2.1 Information Distribution

The PMIS contains several features and functionality to enable effective and efficient sharing of information. As documents are added to the system, or any updates are made to issues, discussions, and tasks, members of the project are notified. Two key elements of note:

1. The user responsible for adding a document or making a change may select all site users that should have access to the information as well as who will be notified. This is part of the "save" function and is included in the document management workflow.
2. Each user may set the notification standards based on their individual preferences[7].

4.2.2 PMIS Structure

The PMIS structure mirrors the organization of the Strategic Mobility 21 Program. The primary Project Management site is the Strategic Mobility 21 Program. As sub-projects within the SM21 program, each IPT has its own Project Management site. Within the IPT project site, another sub-project has been created for each CLIN/deliverable level project. The following provides an overview of the structure:

* Strategic Mobility 21 – Program Level: This level contains the overall program WBS, documentation, final deliverables, issues, and calendar. This site provides the primary source of collaboration for the SM21 Management Team.
* IPT Projects: Each IPT has a sub project. The IPT manager is the owner of the site and can set up the management of the IPT based on the needs of the CLIN level sub-projects.
* CLIN Projects: Each CLIN has a separate sub-project area enabled and managed by the CLIN project manager. This site level should be used to develop and track the individual CLIN project plans, work products, and collaboration. As each deliverable reaches the status for IPT level review, the appropriate references and documents should be copied to the IPT level and likewise to the program level site.

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[7] The "Getting Started" section of the user's guide discusses the features and functions of the dashboard and PMIS interface.

4.2.3 Work Breakdown Structure (WBS)

The PMIS references project plans and work breakdown structures as "Tasks". This is a primary application button located at the top of the Dashboard. At the program level, the WBS has been created and updated within the Task functions to show the overall program tasks, deliverables, and project managers[8].

4.3 Communications Planning, Polices, and Procedures

4.3.1 Communication Flow

The communication flow within the SM21 PMIS is intended to be agile, responsive, and flexible, based on project manager needs for guidance and support beyond project resources, or as a result of interdependencies of multiple projects. Additionally, while each project manager is vested with a large degree of autonomy, channels are provided for program oversight and peer review to assure accountability and synchronization of efforts across projects.

IPT leaders have been designated to assist in span of control in aggregating information for accountability and input into program reports to ONR, while functional committees will be established to provide peer guidance and review of project status and group projects along functionally related lines.

Decision Documents are flexible tools used to record decisions for projects, particularly when collaborative agreements must be reached between multiple projects. Decision Documents provide both a common method of articulating issues, to include background information, and a common method to record the history of decisions in a chronological order, thus showing the evolution and logic behind decisions as they are reached.

4.3.2 Communication Requirements

For status reporting and communication planning, the following groups have been defined as audiences and their core communication requirements identified.

4.3.2.1 Sponsors

ONR is the current sponsor for the Strategic Mobility 21 program. Reporting requirements are spelled out in our proposal, and subsequent SOW with ONR. The following items are required for submission per the contract. However, as they roll up through the submission path, they provide valued communication to the entire program team.

- **Title: Quarterly Status Reports**
    - Primary Audience: Sponsor
    - Secondary Audience: Program Team
    - Method: Document, Briefing Presentation, follow instructions in templates

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[8] The PMIS enables users to create a project plan using MS Project and synchronize the plan with the PMIS for Task online management. Each IPT and Project manager will be responsible for creating a WBS for their responsible area. This can be done manually within the PMIS, or for those familiar with MS Project, the WBS can be created in MS Project then imported into the PMIS.

provided in the document library.
  o Frequency: Quarterly
  o Inputs: All IPT Managers to provide input for their projects as a single status report as well as slides for the presentation.
  o Owner: SM21 Program Manager
  o Follow-up: Minutes to be recorded and published on the PMIS. Response to actions identified will be noted in the minutes with follow-up by PM.

- **Title: Monthly Status Reports**
  o Primary Audience: Sponsor
  o Secondary Audience: Program Team
  o Method: Document, Use Template provided under Project Reports folder in Document Library.
  o Frequency: Monthly
  o Inputs: All CLIN PMs to provide a status of their projects to the IPT Managers.
  o All IPT Managers to collate and provide one report for their projects as a single status report to the SM21 Program Manager.
  o Owner: SM21 Program Manager
  o Follow-up: TBD?

- **Title: Deliverable Submission**
  o Primary Audience: Sponsor
  o Secondary Audience: Program Team
  o Method: Document
  o Frequency: Per Project Plan
  o Inputs: See specific CLIN for development and review process, Functional Committees and IPT manager will participate in reviews.
  o Owner: CLIN Project Manager, SM21 Program Manager
  o Follow-up: TBD

4.3.3 Project Management Team

The SM21 Program Management Team requires that monthly status reports be submitted by each project manager. The reports are submitted through the IPT Leaders, who will aggregate the reports prior to submitting them to the SM21 Program Manager. Status Reports will form the supporting information for production of the ONR Monthly and Quarterly review reports. The initial Monthly Status report will also include administrative data concerning the project, and will be updated as status changes. Status report formats and instructions can be found on the PMIS site at:

Documents > Project Reports > Monthly ONR Reports Input > Template: Monthly ONR

4.3.4 Program Participants

The program participant group consists of the Program management team, all sub-contractors, and all members of the SM21 program. This group should receive communications that address global program status as well as any issues that, informative or action related, are relevant to all

participants.

4.3.5 IPT Manager

Each IPT Team is responsible for specific tasks in the Program WBS. The IPT Team leaders will consolidate project manager status reports, and will ensure associated CLIN project managers post their WBS to the PMIS site.

4.3.6 Project Managers

Each project manager is responsible for a specific task as defined in the program proposal. In accordance with the approved PMO-OP procedures, project managers will coordinate the review of all deliverables or products to become official program documents prior to official submission to ONR. Internal coordination and collaboration is encouraged throughout the development stage, and the preferred method of communication and collaboration is the Discussion application in the PMIS, as opposed to e-Mail discussions where documentation of information may be lost to the project.

Monthly status reports will identify the current status of all deliverables as well as define and discuss all issues or concerns and potential resolution actions required to keep the project on schedule. Areas that require assistance or input from the program management team should be raised as soon as possible with updates to progress included in the status document. The Decision Document tool is provided as a mechanism for raising issues and addressing them to the functional committee related to a particular CLIN.

4.3.7 Deliverable Submission

Program deliverables completed and submitted to ONR have specific requirements regarding document details, formatting, and items that are to be included in the submission package. The details of these requirements are included in the following document library location.
SM21 Document Library > Organization/Management Folder > Document Templates and Guidelines Folder > Submission Requirements

This includes the following documents:
• CDRL Distribution Requirements.pdf – direction on requirements
• CDRL Items.doc – direction on completing the SM21SF298 Form
• SM21SF298.pdf – the form that must be completed and accompany the document.
• Tech Report Format NISO Z39-18-2005.pdf

For assistance or questions on the submission requirements, contact the administrative support office or the Program Management Officer.

4.3.8 Risk Notification and Monitoring

The PMIS Risk Application provides an online mechanism to enter, categorize, and track the status of Risk within the Program. As the PMIS has a program level project as well as IPT and CLIN level sub-projects, Risk can be tracked and monitored at all levels. This section will discuss the communication tools available for Risk Management within the PMIS[9].

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[9] Note: See Risk Management plan, Annex B - Technical Plan for additional information.

4.3.9 Change Requests

The Change Management Plan of the PMP defines the process and policies regarding change management. The PMO-OP contains the detailed administrative process for managing the Change Requests.

4.3.10 Document Review Process and Collaboration

IPT developed documentation will be reviewed before publication of each revision. The purpose of the review will be to validate coverage of the requirements and to detect other actual or potential problems in the document being reviewed before it is released.

The responsible Project Manager will submit the document to the appropriate committee for review. All reviewers will review the document, prepare and present questions and concerns, and recommend actions as required.

Appendix A: Acronyms

ACTD –   Advanced Concept Technology Demonstration
APS –   Agile Port System
AIT –   Automatic Identification Technology
CCDoTT -   Center for the Commercial Deployment of Transportation Technologies
CDRL -   Contract Deliverable Requirements List
CLIN -   Contract Line Item Number
COCOM -   Combatant Command
COI –   Critical Operational Issue
CONOPS –   Concept of Operations
CRM –   Consolidated Reference Model
CTO –   Chief Technology Officer
C-TPAT -   Customs – Trade Partnership Against Terrorism
DHS -   Department of Homeland Security
DISA -   Defense Information Systems Agency
GIG -   Global Information Grid
GE -   Grid Enterprise
ICD -   Initial Capabilities Document
ICODES -   Integrated Computerized Deployment System
ISB -   Intermediate Staging Base
IPT –   Integrated Product Team
JALTD –   Joint Advanced Logistics Technology Demonstration
JCIDS -   Joint Capabilities Integrated Development System
JDDE -   Joint Deployment and Distribution Enterprise
JIC -   Joint Integrating Concept
JFCOM -   Joint Forces Command
JLETT –   Logistics Experimentation and Training Test-bed
JOCD -   Joint Operational Concept Document
JPPSP -   Joint Power Projection Support Platform
JTTP -   Joint Tactics, Techniques and Procedures
M&S-   Modeling and Simulation
MOA -   Memorandum of Agreement
NCAT -   Network Centric Analysis Tool
NCOIC -   Network Centric Operations Industry Consortium
NoMaDD -   Nodal Management and Deployable Depot ACTD
ONR –   Office of Naval Research
PMI -   Program Management Institute
PMIS –   Project Management Information System
PMO-OP -   Project Management Office Operating Procedures
PNW –   Pacific Northwest
POE -   Port of Embarkation
POLB –   Port of Long Beach
POLA –   Port of Los Angeles

PPP -	Power Projection Platform
UML -	Unified Modeling Language
USJFCOM -	U.S. Forces Command
USTRANSCOM -	U.S. Transportation Command
RCR -	Requirement Change Request
RFID –	Radio Frequency Identification
RSOI -	Reception, Staging, Onward Movement and Integration
SCASN –	Southern California Agile Supply Network
SCLA –	Southern California Logistics Airport
SEP -	System Engineering Plan
SM21 -	Strategic Mobility 21
SOW -	Statement of Work
SPOD -	Seaport of Debarkation
SRL -	Sense and Respond Logistics
TC-AIMS II -	Transportation Coordinators' Automated Information for Movement System II
TDC -	Theater Distribution Center
WBS -	Work Breakdown Structures

Appendix B: Work Breakdown Structure

Appendix B provides an overview of the Work Breakdown Structure for all deliverables. Dependencies and concurrences are depicted in a series of Gantt Charts that includes each of the Contract Line Item Numbers (CLIN) associated with a deliverable to the ONR. The Gantt Charts are followed by the complete WBS and WBS Dictionary, which represents the entire SM21 FY05 program year (2006 – 2007). The tables reflect the information available for the tasks of the program as established August 23, 2006. The task name, description, dates, and status fields are shown. For the most up to date and relevant view of the task plan, please review the live project management site.

Figure A – 1 Contract Deliverables for CLIN 0001-0021
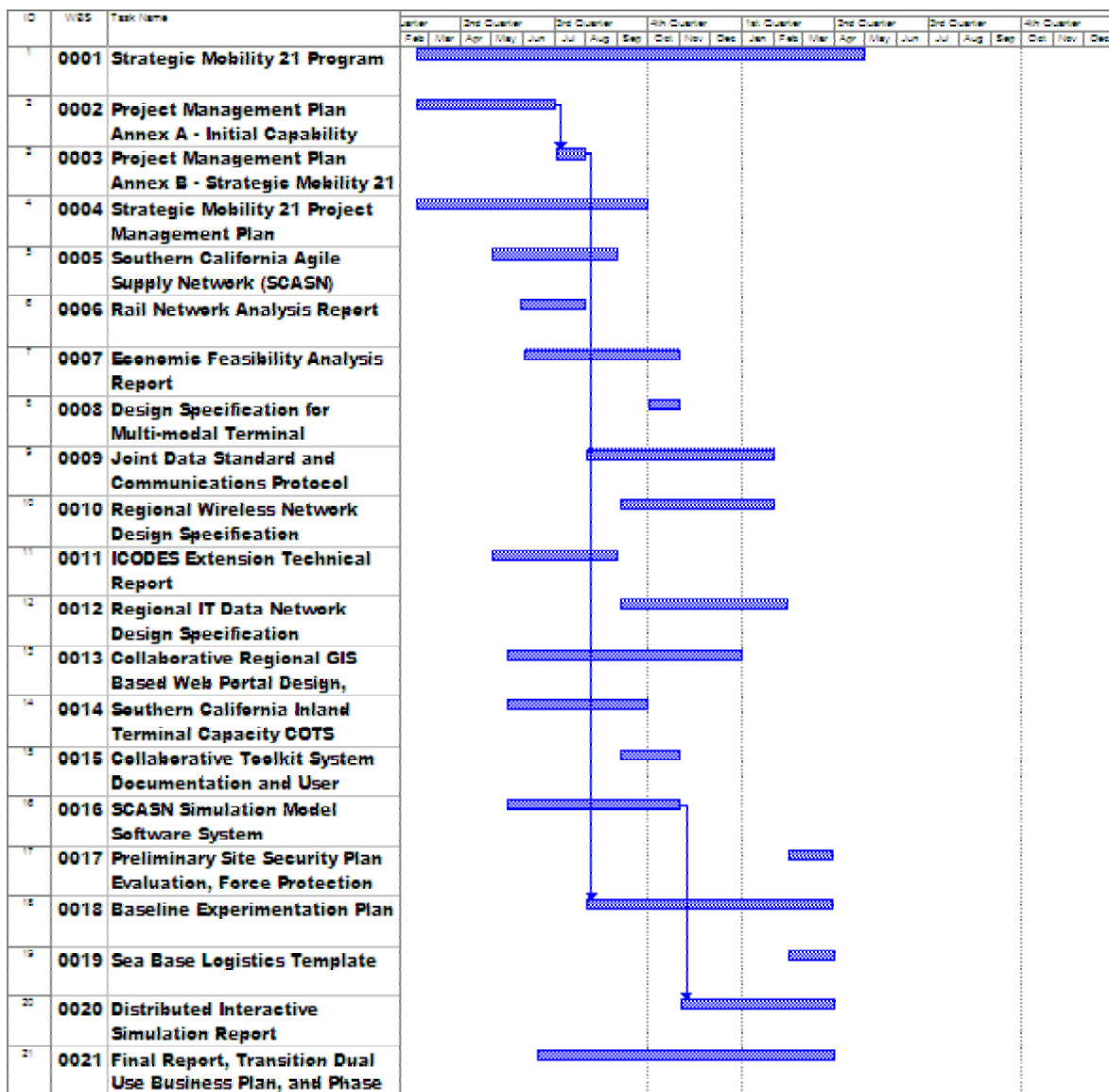
SM21 WBS and WBS Dictionary

The following table reflects an export of the WBS and timeline defined for the FY05 program year (2006 – 2007). The tables reflect the information available for the tasks of the program as established August 23, 2006. The task name, description, dates, and status fields are shown. For the most up to date and relevant view of the task plan, please review the live project management site.

Name	Description	Planned Start	Planned Finish	Deliverable
SM05-1 Technical Coordination & Planning	Technical Coordination Project activities include all CCDoTT technical, managerial, and coordination efforts required to ensure the efficient and effective performance of all Projects and Tasks. This includes: ensuring quality performance and timely completion within budget for all project tasks; establishing a framework for the following year's activities to advance technological capabilities; and incorporating end user participation into the program development in order to ensure a high probability of eventual operational implementation. Deliverables on this project will consist of reporting requirements as set forth in the Cooperative Agreement. Project 1 activities are as follows: 1.1. Project Oversight: This Project encompasses all activities required to ensure the efficient and effective performance of this project. Specific activities include: performing technical oversight and evaluation of all milestones and deliverables on each Project; collaboration with research partners to develop appropriate corrective actions on each project milestone or deliverable by CCDoTT technical review experts; conducting Interim Project Reviews on this project on a routine basis; interface with ONR Project Manager and designated Subject Matter Experts; review and coordination of proposed project modifications.	2/16/2006	2/16/2006	FALSE
SM05-2 – Functional Requirements, Capabilities Gap Assessment, and Technical Review	This Project includes the development of a Project Management Plan; systems analysis and economic feasibility assessments; systems architecture development; and software development. Project 2 tasks are as follows:	2/16/2006	2/25/2008	FALSE
2.1 Strategic Mobility 21 Project Management Plan	This task encompasses the following activities:	2/16/2006	2/25/2008	FALSE
2.1.1 Develop Joint Integrating Concept	Develop Joint Integrating Concept: This effort includes the refinement and translation of the Concept of Operations (CONOPS) for an Agile Port System (APS) and related advanced logistics concepts into operational capabilities and functions as a Joint Integrating Concept. In addition, this effort will include the integration of future operational capabilities into functional means to achieve operational ends. Joint Integrating Concept (JIC) refinement based upon joint capabilities based assessment.	2/16/2006	11/15/2006	TRUE

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Name	Description	Planned Start	Planned Finish	Deliverable
2.1.1.1 - Conduct relevant Joint Deployment and Distribution Process functional mapping	Description: This subtask will only map the relevant segments of the Joint Deployment and Distribution Process that is associated with the operational requirements of an APS. Results of research and analysis to be integrated into the ICD, specifically reflected in Concept of Operations section, Capability Gap section, and development of Appendix F and the As-Is Deployment Business process section	6/1/2006	7/3/2006	FALSE
2.1.1.2 - Map future "To Be" operational environment	Description: This subtask will map the relevant future "To B" operational environment and required joint capabilities to accomplish deployment and distribution process strategic objectives associated with an APS. Results of research and analysis to be integrated into the ICD, specifically reflected in Concept of Operations section, Functional Solutions Analysis section, Final Recommendations, Appendix A, and development of Appendix F and the To - Be Deployment Business process section	2/16/2006	6/30/2006	FALSE
2.1.1.3 - Conduct Functional Area Analysis	Description: This subtask will determine joint functional concepts and integrated architectures (operational tasks, standards, and conditions) necessary to accomplish identified objectives. Results of research and analysis to be integrated into the ICD, specifically reflected in the Joint Functional Area section, Required Capabilities section, Concept of Operations section, and Appendix F	6/1/2006	6/30/2006	FALSE
2.1.1.4 - Develop Quantitative and Qualitative Metrics for the APS	Description: This subtask develops Quantitative and Qualitative Metrics for the APS. This includes Measures of Performance and Effectiveness to Enable the Assessment and Evaluation of the Military and Commercial Utility of Agile Port System Operational Capabilities The ICD discusses desired capabilities for a JPPSP. Metrics used to measure these capabilities will be in accordance with Transformational concepts to include in particular Sense and Respond Logistics, Focused Logistics Joint Functional Concept, and the Joint Logistics (Distribution) Joint Integrating Concept as expressed in mission statements from the Universal Joint Task List.	6/1/2006	6/30/2006	FALSE
2.1.1.5 - Validate Joint concepts with Military and Commercial User	Description: This subtask validates the Joint Integrating Concept, Joint Operational Environment, and measures of effectiveness and performance with the Commercial and Military Users Committee	7/4/2006	11/15/2006	FALSE
2.1.1.6 - Revise Functional Area Analysis	Description: The Functional Area Analysis will be revised based upon the Commercial and Military Users Committee comments Initial review by SM21 management team. Further revisions to occur in production of CDD	6/26/2006	7/3/2006	FALSE
Deliverable CLIN 0002: ICD Technical Report - Annex A to the	0002: Initial Capability Document (ICD) type Technical Report and Annex A to Project Management Plan	7/3/2006	7/3/2006	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
Project Management Plan				
2.1.2 - Conduct Technical Requirements Analysis and Develop Technical Plan	This activity includes the development of the technical requirements analysis and project technical plan documentation, which will become Annex B to the Program Management Plan, developed with input from the project technical committee.	7/3/2006	1/12/2007	FALSE
2.1.2.1 - Conduct technical requirements analysis	Description: Based upon Joint Integrating Concept and Initial Capability Document (ICD), conduct technical requirements analysis	7/3/2006	7/7/2006	FALSE
2.1.2.2 - Technical risk analysis	Description: Determine processes for Technical risk analysis to be included in the Technical Plan, Annex B to the PMP	11/1/2006	11/30/2006	FALSE
2.1.2.3 - Software development plan	Description: Inclusion of processes for Software systems analysis and software development plan to be included in Annex B to the PMP	11/1/2006	11/21/2006	FALSE
2.1.2.4 - Project technical plan	Description: Draft project technical plan.	12/1/2006	12/11/2006	FALSE
2.1.2.5 - Technical plan validation	Validate project technical plan with SM21 Technical Committee and revise the project technical plan based upon Commercial SM21 Technical Committee comments.	12/12/2006	1/12/2007	FALSE
Deliverable CLIN 0003: Project Technical Plan - Annex B to the Project Management Plan	0003: Project Management Plan Annex B â€" Strategic Mobility 21 Project Technical Plan	8/1/2006	8/1/2006	FALSE
2.1.3 - Draft Strategic Mobility 21 Program Management Plan	The purpose of the Program Management Plan is to define, prepare, integrate, and coordinate all subsidiary plans and procedures into a single, cohesive resource to guide how the program will be planned, executed, monitored and controlled, and closed for the Strategic Mobility 21 program.	2/16/2006	2/25/2008	FALSE
2.1.3.1 - Subtask name: Integrate ICD and technical plan into	Description: Translate concepts into simulation, emulation, experimentation, demonstration and deployment/transition plan	12/12/2006	2/25/2008	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
2.1.3.2 - Integrate demonstration plan into transition plan	Description: Transition Business plan for limited leave behind operational capability and transition of military and commercial dual use power projection logistics support and Joint Deployment Training Center West	2/16/2006	9/29/2006	FALSE
2.1.3.3 - Military and commercial user committee project management plan validation	Description: Validation of project management plan	2/16/2006	9/29/2006	FALSE
Deliverable CLIN 0004: Project Management Plan	0004: Strategic Mobility 21 Project Management Plan	10/2/2006	10/2/2006	FALSE
2.2 Systems Analysis and Economic Feasibility	This task encompasses the following activities:	2/16/2006	11/1/2006	FALSE
2.2.1 - Southern California Agile Supply Network Parametric Analysis	Southern California Agile Supply Network Parametric Analysis: This Task encompasses the development of a systems approach to regional logistics network modeling.	2/16/2006	9/1/2006	FALSE
2.2.1.1 - Define the regional supply network geographic boundaries	Description: This subtask will define the regional supply network geographic boundaries, and principal nodes: marine terminals, intermodal rail ramps, warehouse and distribution centers, inland terminals), and arcs (distribution lanes) within the regional supply network	2/16/2006	6/21/2006	FALSE
2.2.1.2 - Define measures of effectiveness and performance of nodes	Description: In terms of throughput velocity, visibility, efficiency/capacity utilization, cost-effectiveness, agility etc, define measure of effectiveness and performance of nodes	2/16/2006	6/21/2006	FALSE

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Name	Description	Planned Start	Planned Finish	Deliverable
2.2.1.3 - Conduct functional process mapping of nodes and lanes (arcs)	Description: Conduct a functional mapping process for nodes and distribution lanes within the APS (marine terminals, intermodal rail ramps, warehouse and distribution centers). Distribution lane mapping will include major regional freight flows (international and domestic intermodal, cross-dock/trans-load warehouse and distribution center, over-the road truck, local dray, store to door)	2/16/2006	6/21/2006	FALSE
2.2.1.4 - Data collection, testing and validation	Description: Data collection, testing and validation of the following data: infrastructure capacity, operating parameters, throughput performance attributes, performance metrics, operating constraints by nodes (marine terminals, intermodal rail ramps, warehouse and distribution centers) and arcs (main line rail capacity). Collect air quality data re major nodes, arcs and distribution lanes. Validate RFID logistics data as collected.	2/16/2006	6/21/2006	FALSE
2.2.1.5 - Static model network nodes and arcs algorithm development	Description: This subtask includes the identification of mathematical relationships corresponding to the capacity and throughput performance of individual network nodes and arcs or distribution lanes (and their impact upon one another), capacity constraints, and the development of linear and non-linear algorithms to describe and measure overall throughput performance in terms of least cost maximum throughput capacity utilization using global algorithm for network performance	2/16/2006	6/21/2006	FALSE
2.2.1.6 - Conduct preliminary APS throughput capacity static analysis	Description: Conduct preliminary APS throughput capacity static analysis by nodes and arcs: slots, equipment, conveyances, dwell and transit times using algorithms	2/16/2006	6/21/2006	FALSE
Deliverable CLIN 0005: SCASN Technical Report	0005: Southern California Agile Supply Network (SCASN) Report	9/1/2006	9/1/2006	FALSE
2.2.2 - Subtask Name: Rail Network Capacity Analysis	Rail Network Capacity Analysis: This Task encompasses the concurrent assessment of expanded rail dispatch model as precursor to the Southern California Agile Supply Network (SCASN) simulation model.	2/16/2006	8/1/2006	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
2.2.2.1 - Conduct test and evaluation of extended capability rail	Description: Conduct test and evaluation of extended capability rail dispatch model and modify as necessary, to support simulation and demonstration. As a part of this subtask conduct baseline rail dispatch simulations to determine current baseline and forecasted ceiling on regional rail main line segments capacity. Colton crossing to Cajon Pass, Cajon grade (half hour separation 48 train daily westbound self-imposed capacity limit on 2 BNSF tracks, daily eastbound limit on 2 BNSF tracks, addition of UP single/double track on Cajon grade, Cajon Summit to Barstow w and w/o impact of adding San Diego origin traffic).	2/16/2006	4/21/2006	FALSE
2.2.2.2 - Evaluate ability of model to incorporate operational attributes	Description: This subtask is to evaluate ability of the model to incorporate operational attributes as follows: speed, transit time and network capacity (number and length of trains, peak train counts, terrain grades and curves, whistle grade crossing limitations, variance in train speed and dispatch priority, track speed and signal systems, sidings length and space available 8-10,000 foot trains, terminal infrastructure)	2/16/2006	4/21/2006	FALSE
2.2.2.3 - Develop operating scenarios for regional short haul rail and	Description: Develop operating scenarios for regional short haul rail (e.g. Direct Vessel to Rail Transfer/Live Loading, Direct Access Vessel to Rail Transfer, Sprint Trains, Shuttle Train - Block-Swap", Shuttle Train "Container Shuffle", Shuttle Trains for Westbound Cargo: Hump Yard Block-Swapping Concept, Regional Shuttle Engines) and evaluate the impact on the following: Inland Rail Facility design, and business model, and recommendations on regional dispatch priority to San Bernardino dispatch center and main line recommendations to Forth Worth and Omaha for routing DOD freight among multiple Power Projection Platforms; evaluate impact of routing, scheduling and monitoring recommendations; evaluate Cajon Pass three main line rail, Victorville and Yermo facility intermodal rail ramp capacity operational considerations, and block swapping and related business practices	2/16/2006	4/21/2006	FALSE
2.2.2.4 - Data conversion and translation between rail dispatch model	Description: Support the agile supply network simulation model development, testing, demonstration and evaluation	2/16/2006	4/21/2006	FALSE
2.2.2.5 - Conduct inland facility competitiveness, economic viability	Description: Conduct short haul rail shuttle and inland multi-modal freight hub competitiveness and economic viability analysis, including operating scenarios for simulation model and operating system design, and business model for short haul rail model	2/16/2006	4/21/2006	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
2.2.2.6 - Test capacity of rail dispatch model	Description: Test capacity of rail dispatch model to accommodate additional capacity and performance parameters of regional main line rail network	2/16/2006	4/21/2006	FALSE
Deliverable CLIN 0006: Rail Network Analysis Report		8/1/2006	8/1/2006	FALSE
2.2.3 - Short Haul Rail Business Operating Model and Truck-Rail Diversion Economic Analysis, and Military and Commercial Facility Strategic Rail System Use Assessment, and Value Stream Analysis	This Task is a comparative micro-economic analysis of local truck dray and short-haul rail, and encompasses a definition of requirements to describe generically the cost structure of a railroad at a high level and evaluate fixed expenses and aggregate revenue requirement; an evaluation of the potential synergism of a marine container short haul operation to where a large warehouse and trans-loading complex is situated and where the railroad is likely to be the line haul carrier when goods are eventually shipped out of the area in non-marine containers; and a Use Assessment of strategic and operational military and commercial facility strategic rail system.	2/16/2006	11/1/2006	FALSE
2.2.3.1 - Train consolidation location selection.	Description: Determine best location for BNSF and UPRR to consolidate trains for a single destination that have sourced from numerous intermodal facilities where traffic generation is not train-size and many destinations are incorporated in to one train.	2/16/2006	7/19/2006	FALSE
2.2.3.2 - Evaluate train operating strategy	Description: Evaluate the operating strategy of each railroad with respect to train size and limitations.	2/16/2006	7/19/2006	FALSE
2.2.3.3 - Evaluate the business model for an agile port operating practice.	Description: Evaluate the business model for an agile port operating practice compared to block swaps including the impact on service and suitable location. Estimate advantage to Marine Terminal operations when using the agile port concept to maximize throughput capacity.	2/16/2006	7/19/2006	FALSE
2.2.3.4 - Describe level of service model.	Description: Describe level of service model that could make this total service package competitive with short haul tracks	2/16/2006	7/19/2006	FALSE
2.2.3.5 - Evaluate	Description: Evaluate short haul rail costs relative to truck costs for similar distances. The	2/16/2006	7/19/2006	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
short haul rail costs relative to truck costs for similar distances.	short haul analysis would include door-to-door published truck rates compared to the loading and unloading cost at the port (the lift cost), Alameda Corridor User Fee, rail line haul charge, unload and unload cost at inland rail facility and truck dray charge from inland rail facility to warehouse and return.			
2.2.3.6 - Cost function and pricing structure for short haul rail.	Description: Develop cost function (labor, rail etc) for short haul rail from Victorville to POLA POLB and develop hypothetical pricing structure for short haul rail.	2/16/2006	7/19/2006	FALSE
2.2.3.7 - Demand Curve for short haul rail	Description: Create demand curve for short haul rail based upon rail volume forecast	2/16/2006	7/19/2006	FALSE
2.2.3.8 - Pricing for Short Haul Rail	Description: Develop optimal pricing scenario for short haul rail	2/16/2006	7/19/2006	FALSE
2.2.3.9 - Short Haul Rail Feasibility Study	Description: Compete feasibility study for commercial short haul project at Victorville	2/16/2006	7/19/2006	FALSE
2.2.3.10 - Military and Commercial Facility Strategic Rail System Use Assessment	Description: Evaluation of military and commercial use of inland facility as dual use multi-modal hub and strategic plan for linking facility to DOD Strategic Rail Network including site access and linkage with DOD facilities at Ft Irwin, 29 Palms, USMC logistics facility Yermo and Nebo, Barstow BNSF manifest and Daggett manifest yards, and BNSF and UP main lines to Chicago and Houston and UP main line to El Paso	2/16/2006	7/19/2006	FALSE
2.2.3.11 - Value stream analysis	Description: Conduct shipper value stream analysis of representative distribution lane shippers (e.g. landbridge, transload, regional warehouse/distribution center, store door) including distribution process mapping and joint experimentation and demonstration	2/16/2006	7/19/2006	FALSE
Deliverable CLIN 0007: Economic Feasibility Report		11/1/2006	11/1/2006	FALSE
2.3 Systems Architecture Development		2/16/2006	12/26/2007	FALSE
2.3.1 - Prepare design specifications for multi-modal terminal operating system	This Task encompasses the development of an inland terminal facility operating system design specification.	11/1/2006	12/4/2006	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
2.3.1.1 - Requirements Review	Description: Review military and commercial throughput requirements	11/2/2006	12/4/2006	FALSE
2.3.1.2 - User requirements validation	Description: Military and commercial user requirements validation with military and commercial user group	11/2/2006	12/4/2006	FALSE
2.3.1.3 - Operating System Evaluations	Description: Survey and evaluate alternative DOD and commercial intermodal rail ramp operating systems (e.g. ITOPS)	11/2/2006	12/4/2006	FALSE
2.3.1.4 - Terminal Operating System Design Specification	Description: Prepare design specification for agile port terminal operating system	11/2/2006	12/4/2006	FALSE
2.3.1.5 - Validate Design Specification	Description: Validate design specification with military and commercial users committee	11/2/2006	12/4/2006	FALSE
Deliverable CLIN 0008: Technical Report - Multi-Modal Terminal Operating System	0008: Design Specification for Multi-modal Terminal Operating System	11/1/2006	11/1/2006	FALSE
2.3.2 - Develop Standardized DOD and commercial IT universal data bridge	Develop Standardized DOD and Commercial IT Universal Data Bridge: This Task encompasses the development of a standardized military and commercial logistics data and communication format and protocol.	2/16/2006	2/1/2007	FALSE
2.3.2.1 - Data Analysis Review and Update	Description: Review previously identified EDI data sets used by DOD and the commercial sector. This subtask also includes the review of DOD and commercial EDI data elements, messages, segments and data dictionary including free form expressions	2/16/2006	8/21/2006	FALSE
2.3.2.2 - Data Dictionary	Description: Document military and commercial standardized data elements, segments, and transportation data dictionary	2/16/2006	8/21/2006	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
2.3.2.3 - Establish Data Translator	Description: Establish translators to bridge DOD and commercial EDI message traffic	2/16/2006	8/21/2006	FALSE
2.3.2.4 - Validate Data Standard	Description: Validate data standard and communications protocol with military and commercial users committee	2/16/2006	8/21/2006	FALSE
Deliverable CLIN 0009: Data Standard & Comm Protocol Report	0009: Joint Data Standard and Communications Protocol	2/1/2007	2/1/2007	FALSE
2.3.3 - Development of Wireless Data Tracking Network Design Communications Architecture	This Task encompasses the development of an Agile Supply Wireless Data Network Design.	9/4/2006	2/1/2007	FALSE
2.3.3.1 - Determine user and associated requirements for wireless data tracking system.	Description: Determine user requirements through the development of use cases. As a first step in use case development, review after action unit reports and lessons learned by USMC and USA units in Operation Iraqi Freedom Deployment in terms of maintaining in transit visibility and use of Automated Identification Technology (OCR, container seals and RFID unit equipment tags, rail cars tags etc). Through direct interviews with the commercial and military user communities, develop user interface screens and user interface storyboard. Establish system performance requirements and validate required, universal data elements with commercial (container number, date/time/ location, origin/destination, status empty/full) and military (Transportation Control Number, TCMD, UEL, container number, tag number etc) user group members. Establish and outfit software integration laboratory at Victorville site.	9/4/2006	2/1/2007	FALSE
2.3.3.2 - Document functional specification and initial system architecture.	Description: Document the functional requirements in a functional specification and perform system analysis based on the functional requirements. Review logistics published literature and case studies on Southern California business interruption and supply chain consequences associated with port of Los Angeles Long Beach slow down in fall of 2004 to gain further insight into required system functionality. Confirm functional/user requirements with military and commercial user community.	9/4/2006	2/1/2007	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
2.3.3.3 - AEI Data Output Requirements	Description: Define AEI data output requirements to drive Wide Area Network	9/4/2006	2/1/2007	FALSE
2.3.3.4 - Develop COTS middleware data link to Wide area Network	Description: Develop middleware to link output of sensors, seals, readers, communication/data links as inputs to Wide Area Network	9/4/2006	2/1/2007	FALSE
2.3.3.5 - Develop wireless system specification	Description: Develop wireless system high level user validated design specification including COTS middleware to support applications software	9/4/2006	2/1/2007	FALSE
2.3.3.6 - Analysis of DOD systems for potential system interoperability	Description: Analyze potential for interoperability of DOD systems for horizontal and vertical collaborative visibility access to required data elements. If possible, obtain user/developer access to one or more DOD operational and exercise logistics systems (ICODES, TCAIMS II, GTN21, WPS, IRRIS, JDLM, other).	9/4/2006	2/1/2007	FALSE
2.3.3.7 - Operational testing of Wide Area Network by user community	Description: As a first step conduct system user training, and then engage users to complete operational testing using an operational test plan developed as part of this subtask. Following operational testing, document system shortfalls and prepare a series of experiments designed to improve system functionality. The objective is to validate system functionality, design, and interoperability.	9/4/2006	2/1/2007	FALSE
Deliverable CLIN 0010: Wireless Net Design Spec Report	0010: (Regional Wireless Network Design Specification) JPPSP Wireless Network (WAN) software and hardware design specification and technical report	2/1/2007	2/1/2007	FALSE
2.3.4 - Extend ICODES Vessel Load Planning Software	This Task encompasses the extension of the Integrated Computerized Deployment System (ICODES) to upstream vessel load planning in a collaborative environment including unit logistics, rail, marine terminal, intermediate inland node, and vessel load planners to facilitate simulation and demonstration of inland pre-staging and marshaling, short haul unit train synchronization, just in time arrival at marine terminal and concurrent vessel loading on stow to flow last-in first-out load sequencing.	2/16/2006	9/1/2006	FALSE
2.3.4.1 - Perform capability gap analysis	Description: Develop work around solutions for unmet needs after performing capability gap analysis and customize existing ICODES interface capabilities as required.	2/16/2006	6/21/2006	FALSE
2.3.4.2 - Conduct test runs to validate research results.		2/16/2006	6/21/2006	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
Deliverable CLIN 0011: ICODES Extension Technical Report		9/1/2006	9/1/2006	FALSE
2.3.5 - Regional Integrated Container Tracking System Grid Analysis and Prototype Operational System Design Specification	This Task encompasses the development of a regional joint commercial-military AEI surface transportation integrated data grid collection system as prototype for operational system for tracking containers (empty and full), chassis, rail cars, trailers using AIT (combination of optical character readers, barcode, active and passive tag readers, and differential GPS, CVISN). This Task will provide a design specification for a Southern California Wide Area Network (WAN) linking various automated identification technology inputs with universal data elements and electronic data interchange messages and eventually extended machine language messages on a web portal.	2/2/2007	12/26/2007	FALSE
2.3.5.1 - Grid Survey and Analysis	Description: Survey and analyze existing road and rail sensor grids, reader locations, height, power transmission, fiber optic lines, and output formats and data	2/2/2007	7/16/2007	FALSE
2.3.5.2 - Select Automated Identification Technology (AIT)	Description: Select Automated Identification Technology (AIT) (Active, semi-active, passive) for unit equipment tag reader site(s), and automated container seals checks, and wireless network (DGPS) for equipment/conveyance slot layout	2/2/2007	7/16/2007	FALSE
2.3.5.3 - Standardized Rail Consist	Description: Develop standardized rail consist and sensor text file internet FTP outputs	2/2/2007	12/26/2007	FALSE
2.3.5.4 - Grid Gap Analysis	Description: Determine need for additional AEI rail and highway grid sensors and optimum locations	2/2/2007	7/16/2007	FALSE
2.3.5.5 - Wide Area Network Wireless Hardware Evaluation	Description: Evaluate data collection grid architecture for truck (CVISN tags/readers on tractors, RFID seals and tags on containers side ribs to associate shipment and conveyance, wireless internet communication link, unit equipment RFID tags)	2/2/2007	7/16/2007	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
2.3.5.6 - Prepare prototype regional operational system design specification	Description: Integrated communications and database design with hardware/software and link to Wide Area Network and web portal	2/2/2007	10/5/2007	FALSE
2.3.5.7 - System Beta Testing	Description: Beta test AEI web based prototype network design	2/2/2007	7/16/2007	FALSE
2.3.5.8 - Regional Demonstration	Description: Conduct integrated regional Wide Area Network prototype demonstration	2/2/2007	7/16/2007	FALSE
Deliverable CLIN 0012: IT Data Net Design Spec Report	0012: (Regional IT Data Network Design Specification) JPPSP grid analysis and facility hardware and software design integrated with the existing surface transportation grid and the documented results of limited AIT demonstration level hardware and software system installed at the JPPSP	2/13/2007	2/13/2007	FALSE
2.3.6 - Strategic Mobility 21 GIS Web Portal and User Interface (Dashboard)	This Task encompasses the design and initial capability development of a web-based regional Agile Port System information portal incorporating a geographic information system (GIS). Among other functions, the web portal will link the inland multi-modal facility (also to be designated as a military logistic support platform (LSP) operating system with selected marine terminals for multi-modal tracking and with DOD Power Projection and Logistic Platforms for rail shipment tracking demonstration purposes. The web portal will be capable of continuous monitoring (accepting interchange data) from multiple sensors (RFID tags, rail car readers, container, chassis and trailer AIT devices) and electronic data interchange from multiple sources (marine terminals, ocean carriers, trucking companies, rail carriers, and shippers). The web-portal will also allow access to the project management system, public access to general project and system information, and existing databases, such as infrastructure attributes, that could be made available to authorized personnel for research and model development.	2/16/2006	1/1/2007	FALSE
2.3.6.1 - Develop web-portal user requirements	Description: Identify system users and stakeholders. Conduct use case development seminars to document business use cases, required user interfaces, system functionality and portal information content. Create user-interface storyboard and develop prototype user interfaces for evaluation by the military and commercial user community.	2/16/2006	10/5/2006	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
2.3.6.2 - Document the Functional Requirements	Description: Document the functional requirements and complete the following analysis which will be summarized as functional requirements: Analyze potential web-portal interfaces with other data sources and models and evaluate COTS and government owned GIS applications for potential integration. Define regional geographic network boundaries to be included in the web-portal including: natural features (e.g. Cajon Pass); and transportation infrastructure (marine terminals, intermodal rail terminals, freeways, rail main lines, Victorville) as the basis for layered GIS display design. Evaluate the use of ArcView, ArcInfo, and ArcNetwork software for spatial network design. Develop the requirements for a geographic relational database from documents including images, word processing files, CAD drawings, etc, in which any document from the system database can be attached to geographic features; including multi-user SQL-Oracle query environment capability. Define requirements for a multi-layer GIS user interface for the Regional Surface Transportation Planning Simulation Model incorporating simulation mode and 2D and 3D graphic display capability.	2/16/2006	10/5/2006	FALSE
2.3.6.3 - Conduct web-portal system analysis and document the preliminary design	Subtask lead: CSUSB	2/16/2006	10/5/2006	FALSE
2.3.6.4 - System initial capability implementation, testing, and deployment	Subtask lead: CSUSB	2/16/2006	10/5/2006	FALSE
Deliverable CLIN 0013: GIS Web Portal Design Report	0013: (Collaborative Regional GIS Based Web Portal Design, Development and Documentation) Web portal interface design specification, software system architecture, software coding standards, test and evaluation plans, and rapid prototype demonstration and documentation.	1/1/2007	1/1/2007	FALSE
2.4 Software Development		2/16/2006	11/1/2006	FALSE
2.4.1 - Develop multi-modal terminal throughput capacity model using Ablaze developed software	Develop Multi-modal Terminal Throughput Capacity Model: This Task encompasses the development of a Southern California Marine and Inland Terminal Capacity Planning Simulation Model to facilitate inland facility design to maximize throughput capacity and synchronize marine terminal-inland terminal just in time operations.	2/16/2006	10/2/2006	FALSE
2.4.1.1 - Software	Description: Develop business requirements based upon alternative operating scenarios	2/16/2006	7/5/2006	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
Initial Setup				
2.4.1.2 - Software Testing	Description: Test CAPS (COTS) software and report to developer any bugs requiring corrective action	2/16/2006	7/5/2006	FALSE
2.4.1.3 - Develop Simulation Scenarios	Description: Develop operating scenarios and conduct throughput analysis for brigade size modular unit and demand and service level driven commercial throughput levels based upon alternative operating scenarios	2/16/2006	7/5/2006	FALSE
2.4.1.4 - Provide model output for use in Automation Associates Network Simulation Model	Description: Format output data from CAPS simulation model into MS EXCEL for use in AAI Southern California Freight Distribution Network Simulation mode	2/16/2006	7/5/2006	FALSE
2.4.1.5 - Rail Dispatch Capability Data Conversion	Description: Data conversion and translation with AAI Network Model with rail dispatch model	2/16/2006	7/5/2006	FALSE
2.4.1.6 - Terminal Model Software Test and Demonstration	Description: Install and test CAPS software at PASHA (and ITS terminal) to support integrated network and terminal simulations	2/16/2006	7/5/2006	FALSE
Deliverable: CLIN 0014 Southern Ca Inland Terminal Capacity COTS Simulation Model		10/2/2006	10/2/2006	FALSE
2.4.2 – Define Use of Collaborative Decision Support Tools	This Task encompasses the definition of a Simulation Demonstration Decision Support Process including ontology and application of intelligent software agents to regional agile port system information technology architecture, and the adaptation of multi-agent logistics collaborative decision support tools (ICODES, SEAWAY, TRANSWAY) to SCASN to perform simulation assessment and extend C2 and system monitoring capability to simulation model.	9/4/2006	11/1/2006	FALSE
Deliverable CLIN 0015: Technical Report - System Documentation and User Manual		9/4/2006	11/1/2006	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
SM05-3 Simulation, Emulation, Experimentation, & Demonstration	This Project includes the Strategic Mobility 21 Integrated Project Management structure; development of a Southern California Agile Supply Network (SCASN) simulation model; specifications for a regional smart and secure trade corridor and deployment force protection; a baseline experimentation, emulation & demonstration plan; and Sea Basing logistics template evaluation. Project 3 Tasks are as follows:	2/16/2006	12/3/2010	FALSE
3.1 Assemble SM21 IPM Structure	Assemble Strategic Mobility 21 Integrated Project Management Structure: This Task encompasses the development of an Integrated Project Management Structure using: project management standards developed by the Project Management Institute (PMI), selected Advanced Concept Technology-type Demonstration (ACTD) processes; formats, and general concepts and processes contained in the Joint Capabilities Integration and Development System (JCIDS). The intent is to establish a process for collaborative participation by both the military and commercial user communities.	2/16/2006	12/3/2010	FALSE
3.1.1 Establish Project Management Team	Description: Determine the project management team composition and complete team project orientation training at Victorville off-site.	2/16/2006	4/30/2007	FALSE
3.1.2 Develop Collaborative PMIS Environment and Web Site	Description: Set up the project management website access permission, synchronize the project site with the Microsoft Project Management file containing the project plan and work breakdown structure. Establish the weekly and monthly project reports to be generated by the system.	5/1/2007	7/10/2008	FALSE
3.1.3 Prepare MOA for Participating Military Organizations	Description: Working with ONR, establish a MOA with each participating stakeholder organization.	7/11/2008	9/22/2009	FALSE
3.1.4 Identify Committee Members and Convene Committees	Description: Identify project stakeholders and committee members for the technical, military and commercial committees. Additionally, identify the Project Joint Military-Commercial Oversight Advisory Committee and convene the committee at an offsite meeting-teleconference to review the Integrated Project Management Structure and Integrated Concept Document.	9/23/2009	12/3/2010	FALSE
Deliverable: PMIS Web Site	Project Website with access to a fully configured collaborative project management application	2/16/2006	2/16/2006	FALSE
3.2 Develop SCASN Simulation Model	Develop Southern California Agile Supply Network (SCASN) Simulation Model: This Task encompasses the development of a macro-level regional model for simulation and emulation of a hardware and software system to support distributive interactive simulation of a regional agile distribution network.	2/16/2006	11/1/2006	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
3.2.1 Modeling Requirements Definition	Description: This subtask includes definition of modeling scope and analysis requirements. A draft VISIO version of the network and import geographic transportation infrastructure data will be developed along with a Rail Model Technical Survey and Design Specification Document. The model will be used to provide a Web Based Demonstration of the Agile Supply Network/APS. The model will be capable of tracking DOD unit equipment from multiple Power Projection Platforms (e.g. Fort Lewis, Fort Hood) and Ft Irwin.	2/16/2006	8/7/2006	FALSE
3.2.2 Regional Database Design	Design and populate relational database based upon "as is" data parametric analysis of nodes and arcs and develop regional supply network dynamic simulation model	2/16/2006	8/7/2006	FALSE
3.2.3 Model Validation	Validate model with reference to Ft Irwin military and commercial movement data and RFID and EDI data as available	2/16/2006	8/7/2006	FALSE
3.2.4 Static DB Data Conversion & Translation to Support Simulation Model	Description: Data conversion and translation routine development to run static analysis, support dynamic simulation model with objective routine for network strategy development, analyze operating scenarios, system capacity constraints, levels of service, and optimization routines	2/16/2006	8/7/2006	FALSE
3.2.5 FTP Web Server Encrypted Secure Data Link to ITS Terminal and Pasha Terminal(s)/Sites	Description: Compete FTP secure server data link to ITS terminal and Pasha terminal(s)/sites to populate relational database and dynamic simulation model	2/16/2006	8/7/2006	FALSE
3.2.6 Design VPN for Simulation/Demonstration	Develop secure encrypted Virtual Private Network to link network simulation data sources and beta testers	2/16/2006	8/7/2006	FALSE
Deliverable 0016: SCASN Simulation Model Software Documentation and User Manual		11/1/2006	11/1/2006	FALSE
3.3 Regional Smart & Secure Trade Corridor & Deployment Force Protection Specification	Regional Smart and Secure Trade Corridor and Deployment Force Protection Specification: This Task encompasses the evaluation of secure portal and distribution trade lane mitigation/force protection protocol and preliminary design specification.	1/2/2007	3/30/2007	FALSE

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Name	Description	Planned Start	Planned Finish	Deliverable
3.3.1 - Review inland and related marine facility vulnerability assessments and risk control strategies, and related documentation for surface transportation connectors.	Description: Review applicable DOD force protection doctrine and DHS (USCG, Customs Border Protection, Transportation Security Administration) critical transportation infrastructure guidance concerning intermodal air/surface facilities	1/2/2007	2/15/2007	FALSE
3.3.2 - Evaluate distribution lane layered security system and prepare portal security plan and specification.	Description: Evaluate layered security system components (perimeter access control, security screening and personnel identification (personnel, TWICS Identification verification cards and conveyances), non-intrusive examination technology, WMD portal (Intermodal Container Inspection System (ICIS). Prepare preliminary site security plan and specification for Victorville facility.	1/2/2007	2/15/2007	FALSE
3.3.3 - Validate Inland Terminal Information Technology and Force Protection Architecture Design.	Description: Validate preliminary Inland Terminal Information Technology and Force Protection Design Specification with military and commercial User Communities and Project Advisory Group.	1/2/2007	2/15/2007	FALSE
3.3.4 - Operational IT/Force Protection facility and network capability evaluation.	Description: Develop scenarios to exercise and evaluate limited operational IT/Force Protection facility and network capability.	1/2/2007	2/15/2007	FALSE
3.3.5 - Exercise regional simulation model to evaluate limited operational IT/Force Protection facility and	Description: Simulation model exercise	1/2/2007	2/15/2007	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
network capability				
Deliverable CLIN 0017: Prelim Site Security Plan Eval, Force Protection Portal Design Spec for Victorville	0017: Preliminary evaluation of secure trade lane concept at Victorville for homeland security and force protection, and specification for Victorville facility as technical report	3/30/2007	3/30/2007	FALSE
3.4 - Begin Process of Joint Experimentation, Emulation and Demonstration	Begin Process of Joint Experimentation, Emulation and Demonstration: This Task involves the development of a Joint Experimentation and Demonstration plan to document capability gaps in in-transit visibility within the Southern California APS and the broader end-to-end distribution system for the purposes of evaluating the integration of sense and respond logistics techniques with the Victorville â€" Logistics Support Concept.	12/1/2006	11/29/2007	FALSE
3.4.1 - Develop experimentation technical plan.	Description: Prepare technical plan for conduct of initial deployment process baseline experiment(s) based upon the Operational Concept, which is contained in the OCD, the approved technical plan, and after action lessons learned analysis. Included in the documentation will be the two known required experiments: (1) Advanced ship loading techniques for Strategic Sealift ships using technology such as the use of cameras, sensors, and RFID for command and control of the loading and documentation process; and (2) tracking of individual Class IX items.	12/1/2006	11/29/2007	FALSE
3.4.2 - Validate experimentation and technical plan	Description: Validate technical plan for experiment with military and commercial users group(s) as applicable	12/1/2006	11/29/2007	FALSE
3.4.3 - Develop and instrument commercial or military baseline class 9 sustainment distribution Joint Experiments through the SCASN	Description: Instrument distribution process Joint Experiment with military or commercial class 9 shipments of opportunity. Tracking will be at the item pack, pallet and container level using RFID tags. The intent is to employ this as an initial experiment required to enable the use of sense and respond logistics at the Victorville - military Logistics Support Platform. Conduct after action evaluation and report out to the user communities.	12/1/2006	11/29/2007	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
3.4.4 - Strategic Sealift Ship loading experimentation.	Description: Coordinate with MSC to configure and instrument an MSC controlled LMSR ship with cameras, AIT readers and associated AIT tag technology and a wireless network to monitor and update ship load plan, and perform command and control of the vessel loading process and sequence. Because of ship availability, experimentation may be completed at an alternate location. After completion of the loading exercise, conduct after action evaluation and report out	12/1/2006	7/31/2007	FALSE
3.4.5 - Sense and Respond logistics experiment	USN Description: Initial experimentation in using network model to simulate incorporation of sense and respond logic, attributes, sensors to test dynamic routing, sourcing, self-diagnostics, dynamic healing and throughput dynamics of sense and respond logistics	12/1/2006	7/31/2007	FALSE
Deliverable CLIN 0018: Baseline Experimentation Plan	0018: Baseline Experimentation Plan	3/30/2007	3/30/2007	FALSE
3.5 - Sea Basing Logistics Template Evaluation	Sea Basing Logistics Template Evaluation: This Task encompasses the evaluation of the extension of the SCASN model template to Sea Basing Logistics Intra-theater Application as basis for future Sea-Basing Logistics agile supply network and buffer simulation.	4/2/2007	2/11/2008	FALSE
3.5.1 - EXTEND Analysis (If provided by OP 42)	Subtask lead: IntelliTrans w/AAI, and Dr. Andrew Chen, Dr. John Hwang and Col Stan Jozwiak Subtask Description: Review and analyze EXTEND simulation model application to Sea Basing logistic	12/27/2007	2/11/2008	FALSE
3.5.2 - Sea Base Distribution Network Documentation	Description: Define and map agile logistics supply distribution network characteristics for generic Sea Base including parameters, boundaries, nodes, arcs/distribution lanes, buffers, servers, queues, length/wait times, dispatch protocol in light of user defined requirements, network vectors/matrices trajectory using Microsoft VISIO	12/27/2007	2/11/2008	FALSE
3.5.3 - Sea Base Distribution Network Analysis	Description: Define Sea Basing deployment and sustainment distribution network analysis including vessel characteristics, flow models, platform capacity, critical path elements (bladders, marking equipment)	12/27/2007	2/11/2008	FALSE
3.5.4 - Sea Base Logistics Template design	Description: Define Sea Basing logistics template design and order fulfillment solution through analysis of the critical operational elements of the system and application of distribution network logistics design strategy methodology to Sea Basing operational prototype including Maritime Pre-positioning Force Future (MPFF) and identifying comparable virtual warehouse/distribution center attributes, inbound transportation and outbound transportation and distribution lanes and other key logistics factors	12/27/2007	2/11/2008	FALSE

Name	Description	Planned Start	Planned Finish	Deliverable
3.5.5 - Sensitivity Analysis	Description: Conduct preliminary sensitivity analysis of network design strategy to determine impact on desired service and cost targets based upon critical logistics factors such as demand changes, delivery frequency, shipment sizes, transportation modes and other elements	12/27/2007	2/11/2008	FALSE
Deliverable CLIN 0019: Sea Base Logistics Template Report	0019: Sea Base Logistics Template	4/2/2007	4/2/2007	FALSE
SM05-4: TRANSITION AND DEPLOYMENT	This Project includes conducting a joint community-of-interest APS workshop symposium; and production of a transition business plan and Phase II demonstration plan. Project 4 Tasks are as follows:	2/16/2006	4/2/2007	FALSE
4.1 - Conduct joint community of interest APS workshop symposium	Conduct Joint Community of Interest APS Workshop Symposium: This Task encompasses the demonstration of an interactive web-cast voice and data over advanced logistics internet symposium with military and commercial user group members.	11/2/2006	4/2/2007	FALSE
4.1.1 - Commercial and Military Use Cases	Description: Use Cases	11/2/2006	3/30/2007	FALSE
4.1.2 - Prepare Symposium briefing and demonstrations.	Description: Adapt and revise power point presentation on logistics lessons learned during the deployment and sustainment processes for Operation Iraqi Freedom and the Fall 2004 Southern California seasonal supply chain disruption to interactive web-cast voice and data over internet medium. Adapt use case instructional materials in the use of AIT to improve supply chain/network visibility to distance learning materials for interactive web-cast voice and data over internet medium. Develop treatment, script and agenda for interactive web-cast voice and data over internet symposium.	11/2/2006	3/30/2007	FALSE
4.1.3 - Conduct interactive web-cast Symposium	Description: Conduct interactive web-cast voice and data over internet advanced logistics symposium with military and commercial user group members	11/2/2006	3/30/2007	FALSE

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Name	Description	Planned Start	Planned Finish	Deliverable
4.1.4 - Prepare for web-cast simulation	Description: Develop commercial inbound and military outbound surge deployment supply network scenarios as basis for interactive web-cast voice and data over internet advanced logistics symposium	11/2/2006	3/30/2007	FALSE
4.1.5 - Conduct interactive and non-interactive web based simulation demonstration		11/2/2006	3/30/2007	FALSE
Deliverable CLIN 0020: Distributed Interactive Simulation Report	0020: (Distributed Interactive Simulation Report) Distributed interactive simulation, website, documentation and technical report	4/2/2007	4/2/2007	FALSE
4.2 - Phase I Final Report Transition Business Plan and Next Steps	Phase I Final Report, Transition Business Plan and Next Steps: This Task encompasses the development of a Business Transition Plan and summary review of findings and recommendations for the future.	2/16/2006	4/2/2007	FALSE
4.2.1 - Develop Business Model	Description: Develop business operating model, fiscal and marketing plan for military and commercial use and implementation of residual and interim operational capability and transition plan	2/16/2006	12/1/2006	FALSE
4.2.2 - Operational Objective	Description: Define operational objectives of power projection logistics support platform prototype and Joint Deployment Training Center West	2/16/2006	12/1/2006	FALSE
4.2.3 - Final Technical Report and Business Plan	Description: Complete Final Technical Report and Business Plan as basis for future Training Demonstrations and logistics support Operational Capability	2/16/2006	12/1/2006	FALSE
Deliverable CLIN 0021: Final Report - Transition Dual Use Business Plan, and Phase II Demonstration Plan		4/2/2007	4/2/2007	FALSE
Deliverable: Final Summary Report and Closeout Documents	Input to Final Report, Final Summary Report as required by ONR contract, and Final closeout documents	12/6/2010	12/6/2010	FALSE

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